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Vol. XXII, No. 1 SUPPLEMENT March, 1932

Papers and Proceedings

of the

Forty-fourth Annual Meeting

of the

American Economic Association

WASHINGTON, D.C.

DECEMBER, 1931

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The American Economic Review

Vol. XXII, No. 1

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of the
Forty-fourth Annual Meeting
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PROGRAM OF THE FORTY-FOURTH ANNUAL MEETING

MONDAY, December 28, 1931

10:00 A.M. ROUND TABLE CONFERENCES (Joint meeting with the Business Historical Society)

1. *Private Enterprise in Economic History*

Chairman: E. L. Bogart, University of Illinois.

DISCUSSION: N. S. B. Gras, Harvard University; William Jaffé, Northwestern University; Edwin F. Gay, Harvard University; I. Lippincott, Washington University; Carter Goodrich, Columbia University; F. L. Ryan, University of Oklahoma; Thomas P. Martin, Library of Congress.

2. *Shorter Working Time and Unemployment* (Joint meeting with American Association for Labor Legislation)

Chairman: N. A. Weston, University of Illinois.

DISCUSSION: T. N. Carver, Harvard University; S. M. Levin, College of the City of Detroit; J. P. Frey, American Federation of Labor; E. H. Johnson, Emory University; T. R. Snavely, University of Virginia.

3. *Quantitative Economics* (Joint meeting with Econometric Society)

Chairman: Irving Fisher, Yale University.

DISCUSSION: J. H. Rogers, Yale University; Malcolm C. Rorty, Lusby, Maryland; Mordecai Ezekiel, Federal Farm Board; R. B. Westernfield, Yale University; C. O. Hardy, Brookings Institution; E. J. Working, Stanford University; Z. C. Dickinson, University of Michigan; W. M. Persons, New York City; W. Leontief, National Bureau of Economic Research.

2:30 P.M. FIRST SESSION (Joint meeting with the American Statistical Association and the American Association for Labor Legislation)

Presiding Officer: Joseph H. Willits, University of Pennsylvania.

General Topic: *Technological Change as a Factor in Unemployment.*

Papers: Alvin H. Hansen, University of Minnesota; Harry Jerome, University of Wisconsin; Sumner Slichter, Harvard University.

DISCUSSION: Ewan Clague, Community Council of Philadelphia; Royal H. Montgomery, Cornell University; Boris Stern, U. S. Bureau of Labor Statistics; Albion G. Taylor, College of William and Mary.

5:00 P.M. MEETING OF THE EXECUTIVE COMMITTEE

8:00 P.M. SECOND SESSION

Presiding Officer: M. B. Hammond, Ohio State University.

General Topic: *Economic Organization and the Control of Industry.*

Papers: H. I. Harriman, New England Power Company, Boston, Massachusetts; R. G. Tugwell, Columbia University.

DISCUSSION: L. L. Lorwin, Brookings Institution; R. A. Flanders, Lampson and Jones Company, Springfield, Vermont; John G. Ohsol, Amtorg Trading Corporation, New York City; W. L. Thorpe, Amherst College.

TUESDAY, December 29, 1931

9:00 A.M. BUSINESS MEETING—Reports of Officers and Committees, etc.

10:00 A.M. ROUND TABLE CONFERENCES

1. *Institutional Economics*

Chairman: W. H. Kiekhofer, University of Wisconsin.

DISCUSSION: J. M. Clark, Columbia University; P. T. Homan, Cornell University; H. M. Fletcher, University of Pittsburgh; M. Wasserman, University of Illinois.

2. *Elasticity of Demand as a Useful Marketing Concept* (Joint meeting with the National Association of Teachers of Marketing and Advertising)

Chairman: E. D. McGarry, University of Buffalo.

DISCUSSION: Neil H. Borden, Harvard University; R. S. Vaile, University of Minnesota; J. E. Boyle, Cornell University; Hugh E. Agnew, New York University; Donald R. Cowan, Swift and Company, Chicago; J. F. Pyle, Marquette University; Wells A. Sherman, U. S. Department of Agriculture.

3. *Investments of Life Insurance Companies* (Joint meeting with the American Statistical Association)

Chairman: Solomon S. Huebner, University of Pennsylvania.

DISCUSSION: Robert Riegel, University of Buffalo; Samuel H. Nerlove,

University of Chicago; D. C. Rose, Scudder, Stevens and Clark; M. C. Rorty, Lusby, Maryland; H. D. Corey, College of William and Mary; J. L. Mahoney, University of Pittsburgh.

12:30 P.M. ROUND TABLE CONFERENCE

1. *Real Estate in the Business Cycle*

Chairman: Richard T. Ely, Institute for Economic Research.

DISCUSSION: Richard T. Ely, Institute for Economic Research; J. R. Riggleman, U. S. Department of Commerce; Ernest M. Fisher, University of Michigan; W. C. Clark, Queens College.

2:30 P.M. THIRD SESSION (Joint meeting with the American Political Science Association)

Presiding Officer: Felix Morley, Brookings Institution.

General Topic: *Investments and National Policy of the United States in Latin America.*

Papers: Max Winkler, Bertron, Briscoe and Company, New York City; W. W. Cumberland, Wellington and Company, New York City.

DISCUSSION: V. S. Clark, Library of Congress; Walter H. C. Laves, Hamilton College; J. R. Mez, University of Oregon; B. H. Williams, University of Pittsburgh; Lawrence Dennis, New York City.

8:00 P.M. FOURTH SESSION (Joint meeting with the American Sociological Society and the American Statistical Association)

Presiding Officer: Hon. Ray Lyman Wilbur, Secretary of the Interior.

Presidential Addresses: Emory S. Bogardus, American Sociological Society;¹ Ernest L. Bogart, American Economic Association;² William F. Ogburn, American Statistical Association.³

WEDNESDAY, December 30, 1931

9:00 A.M. BUSINESS MEETING—Election of Officers, etc.

10:00 A.M. FIFTH SESSION

Presiding Officer: Ray B. Westerfield, Yale University.

General Topic: *Recent Changes in Banking.*

Papers: James W. Bell, Northwestern University; W. E. Spahr, New York University.

DISCUSSION: F. A. Bradford, Lehigh University; G. W. Dowrie, Stanford University; J. F. Bell, Temple University; H. H. Preston, University of Washington.

2:30 P.M. SIXTH SESSION

Presiding Officer: W. M. W. Splawn, American University.

General Topic: *The Changing Character of the Transportation System.*

Papers: J. B. Eastman, Interstate Commerce Commission; Stuart Daggett, University of California.

DISCUSSION: M. L. Fair, Temple University; H. C. Kidd, University of Pittsburgh; S. Peterson, University of Michigan; D. P. Locklin, University of Illinois.

¹ Will be published by the American Sociological Society.

² Will be published in the March, 1932, issue of the *American Economic Review*.

³ Will be published by the American Statistical Association.

THE purpose of the American Economic Association, according to its charter, is the encouragement of economic research, the issue of publications on economic subjects, and the encouragement of perfect freedom of economic discussion. The Association as such will take no partisan attitude, nor will it commit its members to any position on practical economic questions. It is the organ of no party, sect, or institution. Persons of all shades of economic opinion are found among its members, and widely different issues are given a hearing in its annual meetings and through its publications. The Association, therefore, assumes no responsibility for the opinions expressed by those who participate in its meetings.

F. S. DEIBLER

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ROUND TABLE CONFERENCES

PRIVATE ENTERPRISE IN ECONOMIC HISTORY

E. L. BOGART, *Chairman*

N. S. B. GRAS.—The size of the business unit is, of course, relative to time and place. The business man who once loomed large, because bigger than his fellows, now appears to us, in an age of big things, to be small indeed.

The traveling merchant, growing up with town economy, is perhaps the first business man who could be thought of as falling within our present interest. He aimed at being a wholesaler, but was somewhat hampered by town regulations and even more by the circumstance of his traveling about. The rise of a class of sedentary merchants in the well-developed towns of the ancient and medieval periods tended to drive the first type of merchant out of existence. This new class had advantages in capital and management and in the gradual diversification of its functions to include insurance underwriting, common warehousing, common carriage, and banking.

Following the industrial revolution came a new type of specialized business man, a pioneer like the traveling merchant. He needed a great deal of technological skill, larger amounts of capital, and special application to one set of problems. Such were Slater, Baldwin, Vanderbilt, and Cunard.

The competition of the last generation has led to combinations, vertical and horizontal, in which not special skill has been the requisite but managerial capacity. Joint-stock companies and financial institutions have provided the capital. A growing class of experts has taken charge of particular managerial jobs. Schools of business and institutes of technology are furthering this.

Thus there seems to have been a swing in history from the specialist to the non-specialist, to the specialist again and then once again to the non-specialist.

WILLIAM JAFFÉ.—Both economic history and economic theory deal with an abstraction. Economic life is continuous with all other phases of social existence—the political, the legal, the religious, the technological, the sentimental, the aesthetic, and so on. Consequently when we select for special treatment certain more or less homogeneous elements, say economic elements, out of the intricate complex which makes up the whole of social life, we are performing an act of abstraction. It does not make any difference whether we look upon these elements as logically concatenated in a system of causes irrespective of time and place, or whether we look upon them as temporally concatenated in an historical sequence; in either case the very thing we are looking at, economic life, is an abstraction. The economic theorist is always conscious of this fact. The economic historian, however, generally labors under the illusion that he has nothing to do with abstraction, simply because the subject matter of his studies appears more positive and concrete. In fact, the subject matter of economic history is no less abstract, no less conceptually torn from the sum total of reality than the subject matter of economic theory. Unless the economic historian makes it a point consciously to cope with the specific problem of abstraction which he faces he is bound to work blindly. He can only guess; he cannot know that what he is studying is economic

history. It may be something or anything else in the whole wide expanse of sociological phenomena.

This leads us to the question: "How delimit the field of economic history?" Obviously the act of establishing frontiers, where none exist in nature, must be arbitrary; but it need not for that reason be vague, capricious, or irrational. What principle would it be best to invoke? It would seem best, would it not, to invoke the economic principle in determining the field of economic history? This is exactly what Karl Bücher does in the opening paragraphs of his *Volkswirtschaftliche Entwicklungsstufen*. There he defines the adjective "economic" as descriptive of those relations between man and his environment by which man seeks to attain the greatest possible satisfaction at the least possible cost, in terms of sacrifices. Moreover, Bücher endows the word "economic" with a social content, since the maximizing of satisfactions and the minimizing of real costs have in human experience been best accomplished through organized association. Another way one may define the adjective "economic" is to make it descriptive of those social relations which arise from the necessity of only partially satisfying wants, since means for complete satisfaction are lacking. The social mechanism whereby economic ends are realized has been, at least in modern times, the market, in which the agents are mainly individual enterprises. Would it not seem logical, therefore, to limit the field of modern economic history to those social phenomena which may be translated into terms of an exchange of goods and services in which the traders actuated by the motives of private enterprise try to get as much as possible for as little as possible?

The most important service which the definition of the field of economic history in terms of the economic principle would perform would be to make possible the use of a key to modern economic history.

What do I mean by a key? I mean a rational device for unlocking the secrets of the causal nexus between events. Too often has the economic historian fallen victim to the fallacy of *post hoc ergo propter hoc*. There are two ways of escaping this fallacy. One is to avoid the problem altogether, by setting down simply a faithful record of events in a vaguely determined category without any reference to links between events. This would give us economic chronicles, the raw or semicooked data of economic history. It does not give us economic history. The other way is strictly to isolate some particular aspect of the flow of events which lends itself to causal analysis. Then the economic historian must attempt to identify given historical sequences with established universal statements of invariable causal relationships. This is, after all, the essence of the operation by which all causal nexus are discovered. If it be asked where shall these statements of invariable causal relationships be found, I should reply in the economic theory of the exchange of goods and services. Professor Werner Sombart's opinion to the contrary notwithstanding, Bishop Whately's science of catallactics—to be sure, in its modern form—is still a mine of precious ore from whence the economic historian may extract the metal to forge the key of his understanding.

It may be objected that if the field of economic history be limited as I have indicated, then, indeed, though it be raised to a plane of abstraction

where the light of understanding may penetrate all, it will be too remote from reality. It will be merely an oversimplified travesty of the movement of events. It may be argued, therefore, that the economic historian should portray history as life and not as a geometrical demonstration in which one of the dimensions is time. To this I should reply that we are faced with a dilemma: we can either have full description without understanding, where each one may pick some facts to support what he wishes to believe, or we can dissect the sum total of reality according to an ideal plan conceived for the purpose of revealing the causal interlocking of successive occurrences. Which horn of this dilemma I choose is evident.

The limitation of the field of economic history to an area where the catalactic key will work is not as narrow as it at first appears. In fact, it often includes more than the economic historian ordinarily looks for. In order that the catalactic key may function it is necessary to have not only records of prices of goods but also records of quantities of goods traded. Now, M. Labrousse, in a recent article in the *Revue d'Histoire Economique et Sociale* on the price of grain in France in the eighteenth century, criticizes older records of prices, displays newly unearthed records, calculates averages, and plots movements of prices; but he explains nothing and can explain nothing without reference to the quantities of wheat sold, and to the effect of these quantities on prices. If the economic historian is not content simply with discovering and chronicling prices (I am not unaware that this alone is a Herculean task) but if he wishes to explain the prices recorded, then he is bound to examine the extent, the functioning, and the devices of the market where the prices are cried. He is bound, furthermore, to set forth whether these prices are determined by competition, by monopoly, or by public regulation. And since the degree of arbitrariness which can possibly enter into the public regulation of prices is distinctly limited, an explanation of prices resolves itself, in final analysis, into an application of the logic of competitive or monopolistic price determination.

Economic history, restricted to economic phenomena, also includes studies of the rise of the business man. The special propensities of the modern business man have probably always existed just as the special propensities of the ascetic, the marauder, and the saint even now exist; but the opportunities for the development, practice, and fruitful exercise of these propensities do not always exist in the same measure. Though economic history properly speaking is more concerned with the vicissitudes of these opportunities (that is, with the rise and development of the market) than with the calculating soul of the business man, still it is impossible to follow the working out of the economic principle without giving attention to the human agents who make this principle real. What I object to is the point of view which attempts to forge the key of causal analysis from such flimsy stuff as the bourgeois spirit which is conceived as penetrating the soul of man at the close of the mediaeval epoch by an act of special creation.

Nor do the limitations which I propose for economic history exclude such studies as those of the industrial revolution or of technological advance in industry and agriculture. Technological progress should, however, be re-

garded only from one point of view; that is, from the economic point of view. Economic history is not concerned with tracing the progress of mechanical engineering; it is concerned only with revealing how a given type of cotton loom, for instance, enables the entrepreneur to exchange his funds available for fixed and circulating investments more advantageously than he could with any other cotton loom known.

Thus modern economic history, conceived in terms of the exchange of goods and services, gives us, to be sure, an idealized and abstract picture; but not so idealized and abstract as to lose all semblance of reality. On the contrary, we still have a complex ever-changing pattern made up of spiritual, social, and technological entities.

The proposal that I am making to restrict the field of economic history to an area where the logic of the exchange of goods and services may act as a key to causal analysis is frankly a tentative one. It is offered as a solution, not as the solution of a neglected problem—the problem of establishing causal links between events on rigorously logical lines. I should like to close by quoting Abbé Galiani who hoped that the thesis developed in his *Della Moneta* would “be attacked with reason and honesty by anyone who had a different and better opinion.”

EDWIN F. GAY.—Economic history furnishes a long commentary on the vicissitudes of the persistent struggle between the principles of free competition and of a controlled economy. The craft guilds of the mediaeval towns were decidedly opposed to free competition, yet the very number of their regulations indicated the growth of competition. From the many phases of the succeeding movement toward control, three points were presented for discussion.

The rise of the merchant-entrepreneur, notably in the textile industries, with expanding competition in a wide market, led to steps toward control within the individual enterprise. Increasing emphasis was placed upon the time element and upon contracts for future delivery, which were binding together all the factors in the industry. But the entrepreneur found it difficult to enforce prompt delivery upon the home-workers of the prevailing system of industry. Partly for this reason the masters turned to the factory system.

In the competition for the consumers' dollar it has been ordinarily held that demand, in itself indefinitely expansible, is limited only by purchasing power. But economic history shows that over long periods of time human wants settle into fixed or stable patterns of demand, and even under the stimulus of modern conditions this pattern offers “consumer-resistance.” The inherent viscosity of the demand, as found in large social groups, should be taken into account, as well as the limits of purchasing power.

With the modern tendency toward reducing the field of free competition by various forms of control, a serious error is made when rigidity is mistaken for stability. Stability means the maintenance of a balance between the shifting elements of the economic environment. It is not by rigidity of prices or of business policy, but by a watchful adjustment of prices and policies to the constantly changing situation that stability may be attained.

I. LIPPINCOTT.—An age of invention is of necessity an age of substitutes,

although in all cases the new discovery does not immediately exert a substitute effect.

We may think of substitutes as falling into at least three classes: (a) Substitute industries, as for example aniline for vegetable dyes; synthetic perfumes for those manufactured from flowers, herbs, and secretions of animals; beet for cane sugar, and corn sugar for both under some competitive conditions; coal gas for animal oils, and kerosene and subsequently electric light for the earlier illuminants; artificial leather, rubber, materials for twine and textile fabrics to replace the natural raw materials; synthetic plastics manufactured from derivatives of casein, phenol, cellulose, and urea to replace a considerable list of products made from wood, clay, and even iron and steel. These are only a few illustrations.

(b) Substitute services, as transportation by pipe line for crude and refined oil, and of motor trucks and busses as partial substitutes for railway service; of automobiles and busses in urban transportation for street cars; and in the retail trade of package goods instead of the old bulk system of distribution.

(c) Substitute processes, as with the Bessemer, Open Hearth, and others as more modern methods of manufacturing steel; and various processes for the production and refining of non-ferrous metals. In this class belong a long list of substitute processes in the manufacture of food products, of petroleum, textiles, not to mention them all.

The primordial effect of the development of substitutes is to widen the scope of the competitive system, to open new avenues of attack on prospective monopoly, to offer consumers a greater range of choice in the selection of wares, and continually to liberate him from restrictions which might be laid upon his market. Second, the competitive effect of substitutes, once they have made an appearance, leads to the prying into the secrets of nature to discover processes for the manufacture of goods and thereby to reduce cost and render a better service. This applies both to mechanical methods and to final consumer's goods. Hence the great industrial importance of chemical and physical research. Moreover, the development of substitutes often causes a considerable shift in the demand for raw materials. This is particularly the case where the new product serves the more exacting needs of all classes of consumers because the raw material itself must satisfy more or less exact specifications.

With the appearance of the substitute industries the defense system of industrial organization begins to work. The substitute increases competition and threatens to dislodge labor and capital in the older industries. This condition is met either by the older industries engaging in research, or in the pooling of discoveries, or in combination. Thus the new combination movement, which is not an integration, but a branching out into unrelated lines, frequently is designed to absorb the substitute industries.

Finally the constant appearance of substitute industries constantly supplies a disturbing novelty to the industrial system. It is an element in industrial instability, in technological unemployment, in the constant need for junking equipment, and in the waste involved in the dislocations of capital and labor.

These conditions suggest obstacles to any effective system of industrial

planning. Under the present system industrial uncertainty is one of the penalties we pay for progress. No doubt the advance could be made more orderly by some system of planning, but it would result in the postponement of many new services, and goods, which the consumer has been educated to expect under the present system. And such planning would not be without a considerable money cost.

CARTER GOODRICH.—My point follows by analogy from the theory underlying the emphasis on private enterprise in this discussion. Just as economic historians have treated the activities of government more fully than those of individual businesses, since the former leave the more convenient records, so also we have given relatively too much attention to labor organizations and too little to the individual worker. We have many trade union histories but few adequate treatments of the other aspects of workers' lives. The explanation is a similar one. Unions adopt constitutions and sign agreements, but ordinary workers leave few such written traces; and the evidence we should most desire often does not exist at all.

What, then, can be used? For current inquiries, field work, of course. For the recent past, the results of such studies and also wage comparisons. Other evidence may be gained from company records, such as those collected by the Business Historical Society; by re-working union material with broader questions in mind; from material collected by modern social historians; occasionally even from physical remains; and, finally, from a source economists frequently overlook, the accounts of workers' lives in imaginative literature.

F. L. RYAN.—While the large graduate schools, with their excellent library facilities, are best fitted to carry on certain types of research in economics, other institutions have unexcelled opportunities in the use of the personal interview as a primary or supplementary research tool. This type of material is particularly valuable to those students who are carrying on local or regional studies. In the Middle West, many valuable studies of this kind can be made. Among those which are worthy of the attention of scholars may be included economic, sociological, and anthropological studies of the Indian, studies in land economics, of early trade, and of labor problems arising out of the presence of the Indian, the Negro, the Mexican, and the hobo.

THOMAS P. MARTIN.—One source of material for research in economic and business history is productive enterprises (that is, agricultural, mining, lumbering, manufacturing, etc.) responsive to markets. Representative business organizations (companies, firms, corporations, or of whatever category) in each section of the nation during the various stages of its history have created and accumulated, beginning with the founder or founders, important series of correspondence (often kept as private papers), directors' minutes, special and periodic reports, account books, etc.; also, files of circular letters, prices current, advertising, etc. Such sets of letters and papers should be carefully collected in each section for various periods and types of enterprises. An important but incomplete collection may be supplemented by discoverable remnants of similar collections.

Marketing and transportation enterprises have likewise left characteristic collections, the important series of which should be carefully collected and

preserved. The extent to which the great mass of routine paper shall be preserved from destruction depends in any case upon its merits and the space available for such purpose. Much may be destroyed, especially in the event of obvious duplication.

Financial houses, particularly the dominant ones of each generation of the section or nation, will always be the subjects of inquiry; and the important series of the papers of such institutions, though defective on account of the large amount of oral negotiation always carried on, should be preserved with particular care, along with the private and most confidential financial diaries, journals, and ledgers.

Organized groups or associations of business enterprises of all kinds (manufacturers, exporters, traders, bankers, tariff associations, free trade associations, related political parties, social, humanitarian, philanthropic, educational, and religious organizations) have left behind materials which may in some cases be richest for the study of economic trends and business policy; but the archives of such organizations, lacking permanent homes, have often met with partial if not total destruction. They are most often found with the private papers of some responsible leader. The manuscripts should be supplemented by the careful collecting of the fugitive publications (circulars, broadsides, pamphlets, etc.) of the organization. Committee minutes and account books give clues to the fugitive printed material.

The private papers of business leaders and of those with whom they corresponded, from the nation's president down, are most important.

SHORTER WORKING TIME AND UNEMPLOYMENT

N. A. WESTON, *Chairman*

T. N. CARVER.—Four errors are found in the reasoning of those who advocate the reduction of the working time of labor as a remedy for unemployment. First, the staggered week or the staggered day does not reduce unemployment; it only smears it more evenly. If it gives employment to more men it also inflicts unemployment on more men. Instead of having some employed all the time and others none of the time, it has all workers employed a part of the time and all of them unemployed a part of the time. It may be a good thing to do, but it does not increase the sum total of employment nor decrease the sum total of unemployment.

Second, more leisure does not necessarily increase the demand for goods. Even if it should increase the desire for goods, that desire is not an effective demand unless it is accompanied by the ability to purchase. Besides, there is no reason for believing that more leisure would even increase the desire for goods. It is quite possible that the leisure would be spent in the cultivation of the arts and graces of leisure, in visiting museums, libraries, and art galleries, or hikes, games and inexpensive amusements. If the cult of leisure should result in the popularization of Gandiism, humanism or any of the highbrowisms, it would decrease the desire for material goods. If it should result in more gardening, more work about the home in making or repairing furniture, painting and repairing the house, and other useful avocations, it would cut down the demand for the products of our wage-paying industries.

If, therefore, men should produce just as much in the shortened day or week as in the longer one, there would be no increase in the demand for goods to furnish a solution of the problem of unemployment.

Third, if men are to receive the same wages for a reduced product per worker it will raise the money cost per unit of product. That it would reduce the labor cost (in terms of money) is merely a matter of long division. It would also increase the capital cost unless labor works double shifts where it now works single shifts. Unless it works double shifts, the working time of capital as well as of labor will be reduced when the shorter day or week is adopted. If it takes more laborers to turn out a given volume of product, it will also take more machines, engines, buildings, etc.

When the cost of producing a unit of product is thus increased, the price of the product must rise in all except the monopolized industries. When the cost of the product rises, people whose money incomes have not been increased, cannot buy so many units of product. There will not be so large a volume of production to be carried on. Even though each worker produces less, it may not take any more workers to produce the reduced volume than it took before.

Besides, even though the money wages of workers remain the same, when the prices of products go up, their real wages go down. Any increase in the number of workers employed will be associated with, if not dependent upon, this reduction in real wages. The same results would have been secured by a

reduction of money wages in the first place without any reduction in the product per worker. That would have reduced the cost and the price per unit of product, wage workers could buy approximately as many units as before, while others could buy more units. This would call for a larger volume of production and employ more workers, though at lower money wages. If, under the shortened working time, with reduced product but the same money wages per worker, more men could be employed, it would be at the expense of lower real wages.

Fourth, it is a mistake to assume that the same results would follow when the shortened working time is adopted in all industries as when it is adopted in one or a few. One industry might reduce its product per worker, either by shortening the working time, or by slowing down, without greatly reducing the volume of its production or the prices of the goods which its own workers have to buy. But when all industries adopt the same plan, the cost of all products, except those produced under noncompetitive conditions, will go up; all money wages and incomes which have not been increased, will buy less; there will be a smaller volume of production, and a fall in the real wages of labor.

If, as the purchasing power of money wages falls, money wages are advanced in order to keep real wages at the old level, that will send the cost of production still higher, reduce the quantities that can be purchased by those who are not wage workers, call for a still smaller volume of production, and completely nullify any supposed advantage to the unemployed.

Samuel M. Levin read a paper on the Ford unemployment policy. [As this paper is being briefed by the American Association for Labor Legislation, an abstract does not appear here. Editor]

JOHN P. FREY.—Doctor Carver's paper on the shorter work day or work week, is a carefully thought out consideration of the subject and in complete harmony with the arguments advanced by the classical economist. With respect to the logic, the carefully reasoned analysis, and the conclusions, I have no particular criticism to make. One feels, however, that unless all the elements of a problem are equally examined and weighed, logical reasoning may lead to illogical conclusions.

Some years ago the metal workers in one trade in a western city began to organize for the purpose of improving their terms of employment. They wanted a shorter work day, their goal being eight hours. The metal manufacturing employers in that city had adopted a policy which precluded any conference with representatives of organized labor. But sentiment for an eight-hour day had developed generally in the community, the public became interested, and appealed to the secretary of the employers association not to refuse a conference with the local union's representatives.

The first spokesman for the local union at the conference was a humanist. His argument for the shorter work day was based upon the willingness of wage earners to share what they had with the less fortunate. Reducing the hours of labor from nine to eight would give a larger number of men em-

ployment, and the members of this trade would be most happy knowing every one was employed.

The last speaker for the union attacked the question from a different angle. He had gathered industrial statistics which indicated that in plant after plant the establishing of an eight-hour day had not reduced the per capita production, and in some instances had increased it. He concluded that the eight-hour day would be fully as beneficial to the owners of the metal working industries as it would be to the workmen.

In reply the secretary of the employers' association said:

We are less able now to consider granting you an eight-hour day than we were before. Some of you have argued that the eight-hour day would make it necessary for us to employ an additional number of workmen. One of you has endeavored to prove that if we establish the eight-hour day, production would increase to such an extent that we would need less workmen than we have at present. Until you have harmonized your own views as to the effect of an eight-hour day, it will be impossible for the employers of this city to grant your request.

Before giving some statistics which must be presented in connection with shorter working hours, I want to emphasize this all important fact that our country is not handicapped because of any incapacity to produce. Our per capita capacity for industrial production has been greater than that of any other country for a number of years.

Studies made by the Federal Bureau of Labor Statistics indicate that if all of our industrial plants had been operated at their full capacity, three hundred days per year, a four-hour day would have resulted in approximately the same volume of production as we had during 1927-28. The problem of the shorter work day therefore is not affected by the equipment we have for industrial production.

We do not see how it is possible to discuss shorter working hours per day and fewer days per week, without going deeply into the question of wages and the distribution of wealth. Both are involved by modern methods of production, the radical and revolutionary methods which engineers and other scientists have applied.

A generation ago most production was the result of heavy manual labor, manual dexterity, and craft skill. These three important factors are being rapidly eliminated. Massive machinery has displaced the heavy physical labor formerly required. Automatic and semiautomatic machinery produces work which has displaced enormous numbers of highly skilled wage earners. Chemical processes are accomplishing the same result. One economist at these meetings who has recently studied the famous Smith plant in Milwaukee, said, that owing to the marvelous mechanical inventions which had been introduced for the making of pipe and automobile chassis, 95 per cent of the labor required ten years ago had been dispensed with.

These revolutionizing methods of production have only begun to exert their influence. Even now during this serious depression, engineers and other scientists are working out methods of production which have for their purpose increasing productivity, but which at the same time are reducing the number of workmen required.

Returning to the subject of shortening the hours, it must be apparent that of equal, if not greater, importance, is the question of economically sound wages. But few economists are publicly stressing the part which economically unsound wages played in bringing about the present depression in the United States. A few statistics may be illustrative.

In 1923, the total value of our manufactured products was \$60,500,000,000. Six years later, in 1929, it was \$69,400,000,000. In that year the total value of our manufactured products was practically \$9,000,000,000 more than it had been in 1923.

In 1923 the total volume of wages paid in our manufacturing industries was \$11,000,700,000. In 1929 it was \$11,421,000,000. The volume of wages had utterly failed to keep in step with the volume and value of manufactured goods.

Perhaps what was taking place is presented in an even more startling manner by the statement of the total volume of wages paid in the United States in 1928, the peak year before the collapse. In that year the total volume of wages, that is the wages paid to all agricultural, transportation, commercial, industrial and all other wage earners, was \$649,000,000 less than in 1927. The wage earners, who with their dependents constitute 80 per cent of the population, were \$649,000,000 less able to purchase the product of our industries than they had been the previous year.

For a long time a majority of our economists and our production engineers as well have considered the laborer almost solely from the standpoint of a producer. It is only recently that they have begun to realize that his function in society as a consumer is of equal importance as the part he plays as a producer. It is the wage earner and his dependents who constitute the bulk of the American market, and it is on the American market that our industries must depend for the sale of over 90 per cent of all that the nation produces.

It is a loss of time, and of no practical value, to discuss the theory of shortening the hours of labor, unless there is included a thoroughgoing consideration of the part which wages must play. In 1925, the convention of the American Federation of Labor endeavored to place the question of wages upon a sound economic basis. The convention declared that "serious injury would result to industry and commerce, unless the real wage, the purchasing power of wages, increases in proportion to industry's increasing capacity to produce."

Had our industrial and financial leaders applied this sound economic basis to wages, the consuming capacity of the home market would have been maintained, and while we would have been influenced by unfortunate conditions in other countries, we would not have been plunged into the frightful depression which has afflicted us since 1929. The time for discussing Doctor Carver's paper precludes a more adequate examination for his thesis. I have endeavored to make it evident that underlying the question of shorter hours of labor, is the all important question of a much more economically sound distribution of the annual volume of wealth created by our industries.

EDGAR H. JOHNSON.—Due in part to mechanical inventions and in part to a more efficient organization of labor, a notable increase in the productivity of industry has been made in the last few decades. It is certainly desirable

that we use the new powers of industry to secure an increase and a wider diffusion of desirable goods and more leisure for the workers.

Every one recognizes that under certain conditions an increased efficiency of labor may sometimes more than compensate for reduced hours. While granting this, Professor Carver's general conclusion, with which I agree, is that the mere shortening of the time of work will not in itself solve the problem of unemployment or the larger problem of maldistribution. His method of reasoning is abstract and deductive and he makes the assumptions usual in economic discussions of competition and of fluidity of the factors of production (labor, capital, etc.). If these assumptions of competition and fluidity were indeed fully realized it is pretty clear that we should never have any serious problem of unemployment for either labor or capital. One of the hypotheses considered, that of a shortened working time with lowered productivity but no reduction in money wages, is so clearly opposed to one of the consequences of full competition, viz., a wage determined by marginal product, that short space might have been used in disposing of it. In behalf of the deductive method it may of course be said that even in times of depression and unemployment the forces of competition do operate though not so efficiently as usual, that there is a tendency for distribution under competition to be according to marginal product, that the best the economist can do is to deal with certain real forces and tendencies which are generally recognized, that no one understands or can appraise all the forces operating in the economic world, and so on.

As to the staggered week, with the division of work and of wages among two shifts of laborers, much can be said for this as an alleviative measure. Thirty dollars of wages will bring more utility if distributed equally between two workers, A and B, than if A has full time work, receives full wages (\$30) and B lives on charity. Moreover, if A and B divide the work and the wages, each receiving \$15, there will probably be a larger demand for the necessities of life, such as food and textiles, than if A had full time work and B lived on charity. During times of depression it seems especially desirable that the effective demand for and the supply of necessities be maintained so far as is possible. The staggered week which tends to mitigate inequalities of income among workers will help to this end.

The most interesting possibility in connection with the lowering of hours of labor relates to the plan of double shifts of workers and a longer use of capital equipment. Not only will this allow for a smaller total investment of capital but it will permit in each plant the more extensive use of machinery. Consider, for example, a machine whose cost for interest and obsolescence is forty cents per day and whose cost for wear and tear is five cents for every hour of use. If this machine were used eight hours per day the cost would be eighty cents per day or ten cents per hour; if used for twelve hours (two shifts of six hours each) the cost would be \$1.00 per day or eight and one-third cents per hour. If the use of the machine was worth nine cents per hour it would be unprofitable to use it when the factory ran for eight hours per day but it could be used with advantage when it ran twelve hours per day. If the laborers should have more efficient machines to operate, their pro-

ductivity is thereby increased. Not only would the cost of the use of machinery per hour be lowered with double shifts but the cost of other overhead expenses would be similarly reduced. It is possible that the gains thus made might be used to increase both profits and wages and at the same time to lower the selling price of the commodity and thus extend the volume of production.

TIPTON R. SNAVELY.—In considering Professor Carver's paper it is necessary to bear in mind two essential facts. In the first place, he has analyzed the economic effects which would follow if a shorter working time were made universal throughout industry. Secondly, it should be noted that the discussion is based on well defined assumptions which are undoubtedly believed to be in close accord with the realities of the problem. On the basis of the premises laid down, Professor Carver's deductions are entirely logical and his conclusions would appear to be unassailable. His paper is excellent from the standpoint of its penetrating analysis as well as that of its breadth of treatment of the fundamental issues involved.

Professor Carver concludes that a mere shortening of hours, whether with or without a commensurate reduction in wages, will not really result in decreasing unemployment. If wages are decreased correspondingly with a reduction in the working time, the effect is merely to extend the existing unemployment to more working persons. The widely accepted opinion that more leisure will intensify the desire for goods, thereby raising the effective demand, is regarded as a *non sequitur*. Leisure is not an antecedent to higher wages, but is a consequence of lowered marginal utility from additional units of purchasing power previously derived.

It is at least plausible, however, that a shortened working day might result in a more effective utilization of capital through double, or even triple and quadruple, shifts. Through the doubt shift "some decrease in the unemployment of labor and some increase in the unemployment of capital would result." This is one of the most fascinating parts of Professor Carver's discussion. While the truth of this assertion may readily be admitted, the extent to which a realignment of labor and capital can be applied effectively will vary greatly in different industries. In certain industries, the multiple shift is already in operation; in others, a new arrangement could hardly be made (except very gradually) without overextending production and spoiling the market. If a given commodity, say a breakfast food, can be manufactured in sufficient quantities, under an eight-hour day, a change to a double shift of six hours each, with the same number of workers, would result in a daily production period of twelve instead of eight hours. This contingency has been accounted for by Professor Carver when he assumes that the quantum of capital applied will be reduced proportionately with a larger number of workers. When the necessary adjustments have had time to work out, the quantity of production will be the same.

The problem of decreasing unemployment becomes primarily one of increasing the total wage costs. Can an increase in the total return to labor be effected without expanding the total money costs of production? Here it seems to me that there is much significance in the final point of Professor Carver's

conclusions; namely, that a reduction of the working time in a small number of industries would have different results from those which would follow if the shortened working time were to become universal. Higher wage rates, as well as a shorter working day, have usually come first in specific plants and industries, complete adoption not being achieved until much later. So it is likely to be with the six-hour day. Professor Carver has shown that a reduction in the working period, with a resulting increase in employment, may be realized by a new combination of labor and capital. The question is, if it is proved feasible in individual industries to reduce the working period without a proportionate reduction in wages, can a more effective combination of labor and capital be found in other industries and the shorter working day gradually be made universal?

There would seem to be two possibilities for some increase in the return to labor, in the long run, thus making possible also some increase in employment. The first is by enlarging the total productivity, as a result of technical improvements and a more effective combination of the factors of production. The late Samuel Gompers testified before the Federal Industrial Commission in 1901 that employers who opposed the eight-hour day as impracticable in their particular occupations, found that it could be made practicable when it was forced upon them. While we know that technical changes in industry are responsible for much temporary unemployment and maladjustment, such changes constitute the surest hope for increased employment and higher wage levels in the long run.

It has been argued by some economists and others that a second possibility lies in the elasticity of the conventional standards of living and saving of those who derive a return from the other factors of production. Thus it is held that the return regarded as necessary on the part of the income receivers of interest and profits is to a considerable degree a subjective standard, and may be altered over long periods of time. While the wages fund is fairly inelastic in short periods it is more elastic in the long run. A psychological change may take place in the rate of return necessary to effect a given volume of savings. It is maintained that the "conception of an independent demand curve for labor, equally with that of an independent supply curve, definitely seems to break down." To the extent that this may possibly be true, some increase in wage costs might be brought about through a shortening of the working day and an increase in the number of workers employed.

FRANCIS D. TYSON.—Professor Carver deals in a convincing way from the general point of view with the theory of the shorter working day and week. If his basic assumptions of a largely competitive economic order are granted, the argument he weaves is devastating, and the outlook for reform dark.

But I wonder whether his intricate analysis really corresponds to the actual conditions in terms of which the problem is to be faced in American industry. The industrial scene is varied in a different way than his logical presentation would indicate. Leading firms in many industries turn out a considerable part of the product, and effectively limit competition. Many of these successful industries produce a large financial surplus, permitting ex-

perimentation in reduction of hours without "narrowing the field of employment of capital."

Professor Carver must have reviewed some such industries in the preparation of his interesting book, *The Economic Revolution in the United States*, in which he pointed out that typical organizations could provide "a saving wage," and allow employees stock ownership. He even expressed the belief, I think, that workers would become capitalists!

Mr. Frey pertinently relates the hours issue to the wage problem, and both to the increasing productivity of American industry. He might well add the advance in management technique to the improvement in mechanical and chemical processes as an outstanding cause of progress. Certainly, to refer to an example of change in hours, the steel industry moved from the two shift to the three shift or eight-hour basis, in continuous processes, with increased hourly pay, without appreciably increasing labor costs; and that industry might have shortened hours generally, as no doubt the Ford Company could have done, without much impairment of surplus.

The vastly increased accumulation of capital by industry, from undivided profits, rather than by individual saving, makes relevant the whole question of stabilizing industry through assuring a better balance between the rate of production increase, and the increase of purchasing power.

Dr. W. I. King has recently been quoted as indicating that the average real wage in American industry was not higher in 1928, near the end of the period of prosperity, than in 1923. I have here some interesting corroborative figures analyzing the course of real wages in New York state. When weighted by an available index of employment they indicate that in that great industrial area the rise in real wages was halted after 1925, but net surplus continued to mount.

We will need, it seems to me, much more factual research, and actual experimentation, before categorical statements and dogmatic conclusions from theoretic analysis are in order. The extension of the shorter work day and week, with a widening of the field of employment in American industry, may operate with much better results for stabilizing our economic system than Professor Carver is willing to admit.

QUANTITATIVE ECONOMICS

IRVING FISHER, *Chairman*

At this session three papers were read: one by Professor James Harvey Rogers on "The Absorption of Credit"; one by Colonel Malcolm C. Rorty on "Quantitative Factors in the Distribution of the Value Product of Industry"; and one by Dr. Mordecai Ezekiel on "The Relationship between Statistical Price Analysis and Mathematical Economics."

Professor Rogers' paper was a mathematical development and extension of the work of Chester A. Phillips, who had shown that an addition to its reserve by an individual bank did not, as was popularly supposed, result in increasing that individual bank's deposit liabilities by ten-fold (assuming the ratio of reserves to demand liabilities to be 10 per cent); that, instead, the increase of reserve and increase of deposits were substantially equal; and that the pyramiding occurred through the overflow from the individual bank to the other banks.

Professor Rogers gave a rigorous mathematical demonstration that such overflow from the banks receiving the funds would, in turn, cause an overflow from these banks to which the funds were communicated, and so on, theoretically, *ad infinitum*. He demonstrated that, as a result of such converging series, equilibrium would be reached when the additional deposit liabilities of the banks as a whole had become ten times the additional aggregate reserve. All of this was developed on the assumption that the general expansion of loans and deposits led to no outflow of cash to circulation.

Professor Rogers also showed a substantially similar result as to loans and discounts. He further applied the theory reversely to deductions of funds instead of additions. In other words he showed how both inflation and deflation work cumulatively and how different was the initial effect on the individual bank from the final effect on banks as a whole.

Having treated mathematically the case in which the general credit expansion led to no increase and the general credit contraction to no decline in money in circulation, he next turned to a similar treatment of the more usual cases in which such increases and decreases occur. In detail, he treated the special case in which the monetary circulation so adjusts itself as to maintain a constant ratio with deposits subject to check. Under such circumstances, the credit expansion of the banking system as a whole upon new funds available was shown to be somewhat less than four-fold instead of ten-fold as in the first case.

"Hence," he said, "the draft on our available credit resources from relatively minor cash-circulation demands is in general much greater than that from reserve requirements for our huge deposit superstructure—a situation which becomes much more pronounced when Federal Reserve requirements are included." A similar result was found for contraction.

For the entire system, including the Federal Reserve banks, he showed that whereas in the first case (in which no cash flows to circulation) the normal credit expansion was approximately thirty-fold, in the second case (of normal outflows to circulation) it was a little less than ten-fold; i.e., when each gold dollar in the Federal Reserve banks is utilized to the maximum.

From such considerations, Professor Rogers showed how in the boom period 1925-29, when circulation requirements continued nearly constant, the credit expansion was very great indeed without serious draft on Federal Reserve or other credit sources, while in 1917-20, when circulation demands increased continually and normally, similar credit expansions required much more of a credit base. He proceeded:

In inflation, a few ringleaders among the banks may by borrowing from the Federal Reserve banks start and maintain for a considerable period the whole upward movement. The expansion of their loans and deposits leads to cash overflows to other banks, which on the receipt of the new cash through ordinary business channels (i.e., through deposits) likewise expand quite naturally and normally and thus continue the credit expansion. The only alternative is to sit idle and receive an ever-increasing cash inflow and try to convince the boards of directors why the new money should not be put to work.

In deflation, an exactly reverse situation is met. The contraction of loans and investments by a few banks draws money from many others and their forced credit contractions make similar drafts on still others. Any bank not liquid enough to meet such drafts is forced to close. Hence, the scramble for liquidity. . . . In a period of general liquidation, plentiful money is an entirely different thing from easy money. A hard-pressed bank caught in a general deflation movement dislikes greatly to borrow from its Federal Reserve bank for two reasons: (1) Because of embarrassing questions usually asked by Federal Reserve authorities, and (2) because the appearance of such new borrowings in their balance sheets brings additional fears to already frightened depositors. Therefore, the alternative course of selling any remaining marketable bonds or paper is resorted to. Thus is explained much of the severe securities liquidation of recent months. The pushing out of funds by Federal Reserve banks through the purchase of bills and government securities should bring the necessary relief.

Professor Westerfield said in part:

No writer of his generation has had so great an influence in the presentation of the elementary theory of bank credit as has Dean C. A. Phillips. In his book, *Bank Credit*, published in 1921, he put his finger on a fundamental error that had been repeated by one author after another for more than a century. Chapter III on "The Philosophy of Bank Credit" stands as a contribution of which Phillips may well be proud; in it he distinguished so-called "derivative deposits" from "primary deposits" and showed how and to what degree "derivative deposits" are created, first, by an individual bank and, secondly, by the banking system as a whole.

To the degree that derivative deposits spring from the requirement of the lenders that the borrowers maintain a goodly percentage balance as a condition of the loan, I think that it is a very malignant banking principle; I understand that Mr. Howard Whipple, a prominent California banker, is about to issue a book on the subject in which he takes that position quite stoutly.

The two parts of Professor Rogers' paper are far from equal in precision. The algebraic formulae give evidence of a more exact statistical

analysis than he has given, for he emphasizes the deficiencies of this analysis and offers it "only for presentation." It is probably well that the presentation is two-fold, for it indicates the problem of the Econometric Society; namely, to devise formulae which can be used to measure the actualities of our economic life and not unduly to spin fine theories of an abstract world. To this end, I will content myself with pointing out two qualifications or phases not touched.

First, the ratio of derivative deposits to the proceeds of the loan varies. It rests chiefly upon the banker's bargaining position with respect to the applicant borrowers. For this reason, it increases in prosperous times.

In the second place, credit is a permissive sort of thing, not the compulsory force it is too often pictured. It may not be taken when offered, and even when taken, it may not be used at once, at all, or fully. The argument of the formulae indicates the maximum extent to which derivative deposits may grow. There is an assumed homogeneity that does not exist. The theory hangs on the existence of an effective demand for losses that will absorb all the new possible credit all along the line. There are, however, phases of the business cycle when lenders cannot find borrowers; and with the improving efficiency of our credit system presumably less and less credit is required to handle a physical unit of goods.

Third, when deposits expand, there is inevitably an expansion in the need for hand-to-hand money. The "volume of money in circulation" is in part merely an estimate, and any definition of "money in circulation" has the tough nut of "hoarding" to crack. And when it comes to classifying deposits and determining the actual amounts that may be classed as circulating, this is at present insoluble. Rogers waives it by saying all expansion is via demand deposits.

Dr. C. O. Hardy then contributed the following remarks to the discussion:

The question of the amount of money that is needed to support an expansion of business or a rise in prices is one which has received surprisingly little consideration. The conclusions that Professor Rogers reached with regard to the very slight extent to which an expansion of the stock market business ties up with capital suggest a fruitful line of inquiry with regard to the amount of capital that would be tied up by an increase in the turnover of commodities and of real estate in connection with a speculative boom in those quarters.

The first part of Professor Rogers' paper, which carries somewhat further the arithmetic of Professor Phillips' noteworthy investigation, seems to me entirely sound and very interesting. I regret that he was not able to present more completely the latter part of his paper in which he makes practical application of the theoretical ideas developed in the first part. Professor Rogers indicates his conclusion that the relationship between the amount of fresh reserves and the amount of bank credit which can be pyramided upon them is such as to account for a much greater potency of rediscount rates as a restraining influence on the expansion of bank funds than as a stimulating influence in a period of contraction. His argument as pre-

sented, however, merely shows that the discount rate has little influence in stimulating expansion; it does not throw any light on the capacity of the discount rate to check expansion.

In this connection it seems worth while to point out that the significance of any sort of restriction in Federal Reserve credit entitled to expansion is always conditioned by the cost to the banks of the next most attractive alternative source of fresh reserves. In times when the gold standard is in operation the banks can always get fresh reserves by selling bonds abroad, borrowing abroad, or calling in deposits which they may have in foreign markets. If the Federal Reserve system attempts to check the expansion of credit by making its services more costly, the tendency is always for the banks to turn to this alternative source. In short, if any central banking system attempts either to inflate or deflate credit it must take the responsibility of carrying the whole banking system of the Western world up or down with it—unless other banking systems are pursuing the same policy at the same time.

The capacity of any banking system to operate in this way is conditioned by the relationship between the size of its sphere of direct operation and the size of the world market. Obviously the Federal Reserve system, or the Bank of England, can come nearer carrying out such a policy effectively than can the Bank of Holland or of Denmark. But even in the case of the largest banking systems, action may be nullified by an action in the contrary direction on the part of other central banks, which facilitates the movement of gold into or out of the country.

The other point about which I hesitate most is the extent to which changes in interest rates, within the range which is reasonably possible, are likely to be effective in choking off a boom. When banks begin to cut off lines of credit, business men are compelled to change their plans; but if they stand ready to furnish credit to solvent borrowers at a price, the demand appears to be very inelastic. So long as the business man has orders on his books, interest is a very minor factor in the cost of filling them.

To summarize the two points, I am very skeptical as to the capacity of the central banking system of any one country, without the co-operation of other countries, to force such advance in the cost of commercial borrowing as will be very significant in restraining optimism.

Colonel Rorty's paper on "Quantitative Factors in the Distribution of the Value Product of Industry," in analyzing the nature of this problem, discussed the fundamental distribution between return for labor (personal service), capital, and natural resources. After presenting the Marxian theory, the single tax theory and the bargaining theory of wages, he pointed out the importance of knowing the facts and the trends, since these may fundamentally determine our political, social and economic philosophy. "Rents of natural resources may be absorbed very readily by taxation, but socialization of capital would involve radical economic changes."

Colonel Rorty quoted the figures of the National Bureau of Economic Research, which indicate that, of the amount distributable between capital and labor, in the highly organized industries, about 70 per cent goes to labor

and 80 per cent to capital. There has been an apparent downward trend in the share of capital during the past thirty years of intense mechanization of industry, and in any case, the very apparent absence of any up-trend in such share.

Although there is an absence of earlier statistics, we may infer from the fragmentary data that the share of capital rose rapidly during the early years of the factory system. There is no absolute reason why this share might not approach 100 per cent more and more closely as time went on, for the typical factory might be one man pulling levers and pushing buttons. However, the facts seem to indicate a rise in the share of capital to about 30 per cent and then a decline, with a tendency to stabilize at, perhaps, 20 to 25 per cent.

It is evident that industrial capital, on the whole, receives, and will continue to receive, only a living wage; that is, ordinary interest plus a reasonable compensation for risk. With the preceding fact granted, the problem becomes one of capital turnover. If, in any given class of business or production, the ratio of gross sales or receipts to invested capital is increasing, then the share of labor in the value product is almost certainly increasing also. An even more direct test is the ratio of annual pay rolls to invested capital.

Colonel Rorty pointed out that increased capital turnover is clearly possible in merchandizing operations and that the trend in this direction is unmistakable, as, for instance, in chain stores and so forth. Modern management aims at increased capital turnover in all operations. This may not be possible, however, in the very highly mechanized industries.

He cited evidence from correspondence with the machine tool industry that investment in highly automatic machines per dollar of output may be greater or less than in nonautomatic or semiautomatic machines. Production costs involve so many elements besides costs of machines and machine operators that a direct approach to the problem is not possible. Managers of highly mechanized industries testify that labor is tending to receive an increasing proportion of the value product.

Colonel Rorty asked:

What appears to be the controlling factor? The very rapid annual increase in the efficiency of machine tools compels the purchaser to insist on a high capital turnover. He cannot risk installing an equipment that may become semiobsolete next year, unless it will pay for itself in two or three years at the most. The more rapidly machine tools are improved from year to year, the more rapidly they must be scrapped. Even now, the machine tool builders themselves recommend at least 25 per cent annual depreciation.

Colonel Rorty arrived at the following conclusions:

(a) Scientific management is insisting on a higher and higher rate of capital turnover in business and industry as a whole; (b) the rate of improvement in machine tool equipment, which is accelerated from year to year, is forcing a high capital turnover in those very industries where an extreme building up of capital equipment might be expected; (c) the observed tendency toward a decline in the share of capital probably represents a real trend toward stabilization at a level lower than 30 per cent; and,

in any case, there is no reason to expect that the share of capital will increase in the future; (d) our economic and social philosophy may very reasonably be based on the assumption that capital, in the future, will receive less rather than more than 30 per cent of the total amount available for distribution between capital and labor. In addition, the indications are that stabilized population, improved transportation, and improvements in agricultural methods will reduce the future share of rents of natural resources in the value product of all industry to something below the present figure of about 8 per cent.

Colonel Rorty's paper was discussed by Dr. E. J. Working and by Professor Zenas C. Dickinson.

Professor Dickinson said in part:

The subject matter of Colonel Rorty's paper is almost an economic paradox. Before the recent statistical investigations into national income, a theorist had some warrant for holding that capital was increasing faster than labor; that the rate of interest was not falling; hence that the share of capital in the product of industry must be increasing. The Federal Trade Commission's estimates for the period 1917-23 assign about 60 per cent of the products of all nonagricultural industries to wages and salaries; while the wage and salary share in the electric light and power industry is given at 34 per cent. According to Professor Douglas' calculations, the capital employed in manufacturing in the United States increased, during the period 1899 to 1922, by some 163 per cent, while the labor employed increased perhaps 60 per cent.

It is therefore somewhat surprising to find that statistical estimates show no tendency in the percentage of product going to wages and salaries to decline. The National Bureau's calculations are supported on this point (though perhaps not as to the amounts of the respective percentages) by Professor Douglas' figures for manufacture in the United States; and moreover Mr. Bowley has estimated that the division of national income in Britain gave to "earned" income about the same share in 1913 as in 1880, and a somewhat larger share in 1924 than in 1911.

Among the numerous cautions which must be observed in interpreting such data, there are a few which I should like to emphasize here. First, independent investigation as to historical trends in the rate of interest in themselves may throw little or no light on important elements in the residual income, which elements go neither to wages and salaries nor to capital in the strict sense. Second, the fluctuations of these latter elements may not appear so negligible as the ups and downs of the wage and salary share, because their base is always much smaller.

A novel point of Colonel Rorty's paper is his emphasis on capital-saving trends in modern business. The tendency of all these economies of capital, considered in themselves, must be to check the demand for capital and keep down interest rates; also to counteract the other forces which cause capital investment per worker to grow. The factor of increasingly rapid obsolescence operates perhaps in more complex fashion. It makes the user think twice before purchasing a tool; and yet if tools are increasingly dis-

carded before they are physically worn out, that must mean an enlarging amount of social capital required for tools.

In any case we must return to the "paradox" of capital supply increasing more rapidly than labor supply, yet apparently not absorbing a growing share of the value product. Possibly this favorable trend in the bargaining power of "labor" (wages and salaries) is peculiar to a declining rate of population growth. The period for which we have the most nearly satisfactory data seems roughly to fulfill Walker's wage theory: capital receiving a living wage; labor the residual claimant.

The third paper presented was that of Dr. Mordecai Ezekiel on "The Relation between Mathematical Economics and Statistical Price Analysis." Dr. Ezekiel first pointed out the superficial similarities: the use of mathematical symbols, the use of mathematical treatment, and the dependence on at least limited mathematical training and understanding. He then discussed the fundamental differences. Mathematical economics starts with stated assumptions, rigidly defined, and investigates the conclusions which rationally follow. This is similar to previous economic theory, but it forces more rigid, detailed, and explicit statements of assumptions. Mathematical economics, which makes no direct attempt at agreement of conclusions with reality, may or may not lead to generalized results.

Statistical price analysis, on the other hand, starts with objective measurements and seeks to determine the interrelationship among the elements through statistical manipulations. The selection of variables and the nature of the manipulation is dependent upon previous logical hypothesis and is more or less controlled by experimental studies of the data, retaining those which are found to be most fruitful in this experimental work. The attempt at statistical manipulation may force a rigid and clear-cut hypothesis.

"The extent of agreement between hypotheses and reality," Dr. Ezekiel maintained, "is measured within the limits of the rigid logical frame and the selection of variety employed. Failure to agree may be due to weaknesses either in hypotheses or in statistical investigation. The conclusions are particular both as to commodity, time, and space, and if these conclusions are successful (high r) may or may not yield relationships in shape for subsequent investigation by purely mathematical processes."

Continuing he said that, in practice, price analysis has been most successful in agricultural commodities alone. This is probably because they conform most closely to assumptions of free competition (having a large number of units, slight in effect upon total, and reacting in fairly continuous patterns). Agricultural commodities also have the most data available and the most funds for investigation.

Price-making forces, however, could be investigated under other situations as well, taking due regard to the nature of the pricing process. Among the influencing factors are the price of electricity, as between cities under utility regulation, coal, size, density, wage level, interest rates, rate of growth, and so forth, but these are factors of geography rather than time.

Price-level changes are as yet only partially understood and imperfectly explained. Many of the relations observed are of unknown generality. For

example, supply-price curves may shift if very high or very low prices are long continued—the question of habit becoming fixed. Short-term elasticity, of course, differs from long-term. The influence of changes in situation is frequently ignored. The suggestion of Evans as to changes in price or price history as one factor in demand and in supply is abundantly illustrated by stock-market records.

"Can the methods of mathematical economics and statistical price analysis be unified, merged, or co-ordinated?" Dr. Ezekiel queried. "The finds of one rests on facts, with a pinch of hypothesis; the other on hypotheses which contain a pinch of facts. Neither adequately treats the nonregular and non-rational elements in economic life." Dr. Ezekiel cited tariff barriers (except in so far as a law of regularity may be discovered in them) and other political changes. He said:

Constant evolutionary changes occur in the institutional structure within which economic changes take place—though *laissez faire* conditions, where statistical analysis so far has worked best, are constantly becoming of diminished importance. Both statistical and mathematical economics face the challenge of modifying and developing their methods to cope with the increasing complexity of their material.

Each can contribute certain things to the other—mathematical economics, things to look for and relationships to run down; price analysis, tentative slope of economic relations, or dynamic demand and supply curves, which present material for further mathematical elaboration.

A full generalized system is still far in the distance and may become increasingly distant—in spite of Moore's brilliant unification of non-realistic materials.

In discussing Dr. Ezekiel's paper, Dr. Leontief said in part:

From among the number of problems which may be raised in connection with this interesting paper, I wish to limit myself to the most general problem—the question of the fundamental relation between theory and empirical investigation.

Every theoretical proposition is a conditional sentence of the form, "If A is true, then B is true." But there is another kind of relationship between theory and statistical analysis: The conditional theoretical statement enables us to surpass the limits of direct observation. This can be done by indirect calculation of unknown B from observed A'.

Surely, by expansion of the field of direct observation we should be able to check our results afterward by comparison of deduced B with actual B'. . . . If such a check were always possible the theoretical framework would become quite useless. The very essence of a theoretical approach is to give us the possibility of ascertaining the unknown facts that lie beyond our direct recognition.

In the statistical price analysis we deal with two sets of data—the one being represented by our price and quantity series, the other relating to the structure of the supply and demand schedules. Quantitative economic theory shows us a certain kind of relation between these two sets of facts. If we should like to check this theory we should firstly have to undertake two

separate and independent empirical investigations of these two sets of data, and, secondly, to study the empirical relation between them and finally to compare the results of this statistical investigation with our theoretical hypothesis.

It seems to me that the general trend in the statistical price analysis until now has been different. Instead of expanding our empirical investigation of both sets of facts, we limit it to only one of them (A')—say, to prices and quantity series. The other (B)—the supply and demand schedules—is usually derived statistically with the help of our theoretical assumptions. Any attempt to check this assumption by comparison with the results of our statistical investigation would inevitably involve us in a vicious circle.

A peculiar technical characteristic of most of the available statistical methods is that they are really never quite adequate to our theoretical proposition. This is perhaps a most striking difference between mathematical statistics and mathematical economics. In contrast to the conditional character of the fundamental theoretical hypothesis these auxiliary propositions (I have in mind secondary mathematical characteristics of different trend formulae, line of regression, etc.) are unconditional and assertive; that is to say, non-theoretical. The different reliability measures, standard errors and coefficient of correlation, I believe, are really relevant mostly to validity of this arbitrary technical proposition.

If our analysis of some agricultural prices is founded on the theoretical assumption that the relation of these prices to the respective quantity produced is determined by the consumers' attitude, then even a most perfect correlation cannot be considered as a proof of this proposition. On the other hand, a perfect lack of correlation cannot disprove our theory. If the linear correlation does not work we can try curvilinear correlation. Even if this attempt were to fail we never should be able to say whether A is due to a wrong theoretical proposition or to the fact that we are using a second degree parabola instead of some other kind of a curve. So long as a theoretical hypothesis is logically involved in statistical analysis it is hardly possible to check the same hypothesis by any comparison with the results of this investigation.

SESSION ON TECHNOLOGICAL CHANGE AS A FACTOR IN UNEMPLOYMENT

THE THEORY OF TECHNOLOGICAL PROGRESS AND THE DISLOCATION OF EMPLOYMENT

By ALVIN H. HANSEN

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The orthodox view that technological innovations release purchasing power which is directed against new goods, and that in this manner the displaced labor is reabsorbed, confuses, as John Stuart Mill pointed out long ago,¹ the demand for labor with the demand for commodities. Mill saw and stated very clearly the fallacy involved in this reasoning, but his criticism appears to have been forgotten in the current discussions. The traditional explanation has it that the total purchasing power is increased by the introduction of labor saving improvements. This new purchasing power, it is argued, is directed toward the purchase of new or additional goods and these require for their production the reabsorption of the displaced labor. In point of fact, however, the displacement of labor of itself means only that the same quantity of goods can now be made at lower cost. It is not until the displaced labor, or at least a portion of it, has again been put to work, that the purchasing power has in reality been increased. Labor saving improvements, it is true, make possible an increase in purchasing power once the displaced labor again becomes active in industry. But the increase in purchasing power is the result of labor reabsorption and not the cause. Labor saving techniques redistribute purchasing power but do not of themselves create additional purchasing power. The increased purchasing power of other groups is exactly offset by the decreased purchasing power of the displaced workers. What these technological developments set free is not purchasing power but productive power.

The productive power set free through the displacement of labor may eventually become reabsorbed into industry in several ways. It may be that credit released from the lower cost industry may find an outlet in other fields. In consequence prices rise, profits improve, business expands, and labor is employed in larger volume. Or, should this development not occur, it may be that the reabsorption takes place through a lowering of money wages. It is also possible that the improved techniques and lower costs may raise profits, increase capital investment and thus raise the demand for labor. This latter development may also, under certain circumstances, necessitate a readjustment in money wage-rates.

¹ J. S. Mill, *Principles of Political Economy*, pp. 96-7 (Ashley edition). See also my "Institutional Frictions and Technological Unemployment," *Q.J.E.*, August, 1931.

Thus in one way or another the likelihood is that the displaced labor will eventually be reabsorbed.

Put briefly, the current, traditional view is subject to criticism on two counts: first, the mechanism usually employed to explain the labor reabsorption confuses cause and effect; second, there is no assurance that the displaced labor will, in all cases, be reabsorbed unless we assume a flexible economic structure; that is to say, a flexible system of prices and wage-rates.

The orthodox view has been roundly criticized from the standpoint of price rigidity by numerous adherents of the institutional school. The position taken is that the displaced labor will not be reabsorbed, as the orthodox view has it, unless the prices of the commodities affected by technological changes are lowered to the new cost basis.

If prices are maintained by cartels, trusts, or any other form of monopoly power, the labor reabsorption, it is argued, will not occur. This traditional institutional viewpoint, while it points in the right direction, needs, it seems to me, some qualification. So long as the price of labor is established in a free market, the displaced labor can eventually be absorbed even though individual prices are rigidly maintained by monopoly power over a wide field of industry. No factor of production can permanently remain unemployed so long as its own price is subject to free market forces. Though the output and prices of certain commodities are subjected to monopoly control, capital can always find an outlet for employment if interest rates fall sufficiently. So also with labor. Should, however, the whole field of industry be completely monopolized, so that every avenue of employment for all the factors of production is closed, then indeed a flexible price system in the labor and capital markets would be of no avail. The institutionalists' criticism of the orthodox position does not, however, presuppose a completely monopolized society.

But while organized resistance to lower prices, conforming to lower costs, does not preclude the ultimate absorption of labor when wage rates are flexible, it is nevertheless true that such action places an undue strain upon the flexibility of wage-rates. Since wage-rates, in point of fact, even in the most fluid society, cannot be perfectly flexible, it cannot be doubted that monopoly and quasi-monopoly control does delay the process of labor reabsorption. Indeed, under certain circumstances, a proper price policy would alone be sufficient to guarantee the re-employment of the displaced labor. Under these circumstances it is quite correct to place the whole blame for continued unemployment upon the uneconomic price policies of organized business groups.

There is, however, still a third theory of technological unemployment. It is the view that technological displacement may become permanent if

wages rise or remain constant while the price of machinery falls. Technological unemployment has increased of late, it is said, because wage-rates have remained during the last decade on substantially the same level, while the prices of capital goods in general have fallen sharply.

This viewpoint represented, in particular, by Professor Sumner Slichter in our meetings of three years ago, while on the right track, does not, in my judgment, go quite far enough in the analysis. To illustrate: During the last century the prices of capital goods in relation to wage-rates have fallen very materially and almost continuously. Yet, up to the time of the World War, there is not the slightest evidence of an upward trend in per capita unemployment.

It is not wage-rates and the prices of capital goods, as such, that matters. Rather it is labor costs in relation to capital costs. If the productivity of labor doubled, capital would not be substituted for labor even though the prices of capital goods had fallen 50 per cent.

The problem of technological unemployment is fundamentally, as I see it, a part of the broader problem of the proportionality of the factors of production. Technological innovations disturb the correct pricing of the factors of production, because they alter the relative productiveness of the factors. Until the prices paid the different factors are again brought into line with the changed productivity the overpriced factor will be displaced.

As a rule, labor is the factor which becomes overpriced in consequence of technical innovations. Technological unemployment is thus seen to be the result of the time lag required to adjust the earnings of the factors to changes in productivity. Were it not for institutional frictions which prevent the pricing of the factors from shifting instantly with every change in productivity, there would be no technological unemployment. Technological unemployment is a function of the failure of the pricing system to adjust itself to changes in the relative productivity of the different factors of production.

If labor is overpriced in relation to capital, a part of it will be unemployed. The correct pricing, of course, implies that the efficiency earnings of labor and capital shall be equal; that is, the money rewards of labor in relation to marginal product, must equal the money rewards of capital in relation to its marginal product. Labor costs and capital costs must be equal at the margin. Under these circumstances the entrepreneur could make no gains from substituting one factor for another. The pricing of the factors may be upset either by a change in the price paid for a factor without any change in its productivity, or by a change in the productivity of a factor, without a corresponding change in its price.

It is the lag in the adjustment of earnings to productivity or of pro-

ductivity to earnings which is responsible for the overpricing of one factor in relation to another, and therefore for the substitution of the low-priced factor for the high-priced factor.

Labor may be displaced by capital in consequence of any one of the following changes: In the first place a forced increase in wage-rates, for example by trade union action, to a point at which capital can be employed more economically than labor. Labor thus displaced would remain permanently unemployed until wages were reduced or else labor's productivity were raised to a point at which its efficiency earnings were again in line with the efficiency earnings of capital.

In the second place, a lowering of the rate of interest might reduce capital costs below the level of labor costs. Under these conditions capital would be substituted for labor. Such substitution, however, would soon cease since every added investment of capital would lower its marginal productivity and raise the marginal productivity of labor and thus again bring the efficiency earnings of capital into line with the efficiency earnings of labor. Eventually the investment in additional increments of capital would reach a point at which any further extension of the roundaboutness of production would become unprofitable; the marginal productivity of capital in relation to its earnings would eventually become lower than the marginal productivity of labor in relation to wages. At this point labor displacement would cease, and beyond this point any further expansion of industry would favor the employment of labor in preference to capital.

Briefly stated, increased saving tends to displace labor since it has the effect, through the consequent reduction in the interest rate, of lowering capital costs in relation to labor costs. On the other hand, each additional increment of capital outlay brings you nearer the point at which further labor displacement becomes unprofitable since the continued process of investment lowers the marginal productivity of capital and therefore raises capital costs in relation to labor costs.

In the third place, technical innovations tend to displace labor since they usually have the effect of raising the marginal productivity of capital. This normally leads, however, to a more roundabout process of production, and this, as we have already noted, tends eventually to re-establish the equilibrium of capital and labor costs, since every additional capital increment raises the productivity of labor and lowers the productivity of capital.

According to the wage-fund theory, particularly as developed and clarified by Cairnes,² displaced labor could not be reabsorbed except through the increased investment of capital. Cairnes believed that the combination of labor and capital was rigidly fixed by the state of the

² J. E. Cairnes, *Some Leading Principles of Political Economy*, pp. 167-174.

arts for each industry, and therefore more labor could not be employed unless more capital were available with which the labor could be combined. Moreover, the source of this capital supply would have to come out of an increase in profits made possible by a reduction in wages. His analysis therefore called for a very substantial reduction in wages in order to furnish a sufficient volume of new capital. The error in Cairnes' analysis lies fundamentally in his belief that the state of the arts rigidly determines the combination of the factors of production.

In point of fact, the large measure of flexibility possible in the combination of factors brings it about that a relatively slight fall in money wages and a relatively slight investment of new capital may alter the ratio of the efficiency earnings of labor to the efficiency earnings of capital very considerably. Thus a new equilibrium can be reached much more readily and quickly than was believed possible by Cairnes. Moreover, Cairnes, with his wage-fund doctrine, was unable to see that the demand for labor comes from prospective income and not from capital, and that this prospective income may become an actuality through the employment of bank credit which enables one to put the productive forces in motion in anticipation of the sale of the product from which the factors of production will eventually have to be paid.

But the general direction of Cairnes' analysis was nevertheless sound. A flexible system of wage-rates and an increase in new investment are the chief instrumentalities through which labor, displaced by technological innovations, is eventually reabsorbed.

It is true that an adequate increase in new investment might absorb any given volume of displaced labor even without a fall in money wage rates, provided, first, that sufficient profits to finance the new investment were forthcoming from the gains of technological improvements, and, second, that the monetary system were able to furnish a sufficient quantity of circulating media to finance the new method of production without producing disequilibrium in the internal price structure. But this is by no means always or necessarily the case. It follows, therefore, that the complete absorption of the displaced labor presupposes, as a necessary condition, flexible capital and labor markets.

This brings us to a consideration of the relation of technological unemployment to a downward trend in prices. If the money supply does not keep pace with the requirements of the highly productive new techniques, the commodity price level must fall. Under such conditions, the displaced labor would be absorbed more slowly. In the event that the fall in prices were not wholly caused by technological improvements but were caused in part by monetary factors, a deflation of the earnings of the factors would obviously become necessary before all could be employed. But even in the event that the fall in prices were caused by technical inno-

vations the displaced labor would be absorbed less rapidly in a period of falling prices. Maladjustments also in these circumstances would develop in the internal price structure for the following three reasons:

In the first place, maladjustments would develop owing to the unequal rates of progress in different industries. If the progressive industries confronted an elastic demand situation they would absorb a larger share of the total purchasing power of the commodity and so force a retrenchment in the inefficient industries which proved unable to reduce costs. Until a new equilibrium were reached unemployment would be intensified. In the next place, falling prices caused by technological improvements cause serious maladjustment owing to the unequal rates of progress of different firms in the industry affected. Only a small fraction of the producers can as a rule take advantage of the new techniques. The less progressive firms are gradually squeezed out and while this process is going on much unemployment will prevail. Finally, even though the general decline in prices is caused by technological progress, the prices are, as a rule, not lowered simultaneously with costs. The firms which have introduced the new methods strive, as a rule, to retain the advantages of the improved techniques, and refuse to pass on the gains to the public in the form of lower prices until they are forced to do so under the pressure of economic necessity. As a rule, business enterprises will not lower prices in line with reduced costs until they have passed through the disillusionment and bitter experiences of depression.

We must conclude, therefore, that a fall in prices caused by technological progress tends to aggravate and prolong the displacement of labor. And if the fall in prices is further accentuated by monetary causes, the displaced labor will be absorbed with still more difficulty. Particularly is this the case when wage-rates are inflexible and fail to become adjusted to such changes in the price level as are caused by monetary factors. In the last decade, the whole world has experienced a downward price trend, and consequently more than the usual difficulty was encountered in absorbing technologically displaced labor.

Finally let us consider the relation of technological unemployment to the stabilization of the business cycle. Let us suppose for the sake of the argument that the business cycle could really be flattened out, whether by monetary policies, by a program of public works, or by the controlled adjustment of investment to saving. With cyclical unemployment disposed of, there is every reason to believe that technological unemployment would thereby be intensified. When is it that the labor displaced by technological innovations or other structural changes is most readily and easily reabsorbed into industry? Is it not in the prosperity phase of the cycle? It is the absorptive power of the boom period that opens up new jobs for the displaced workers. If the boom were eliminated would

not the labor made redundant by machinery become reabsorbed far more slowly, thus increasing the volume of technological unemployment?

Cyclical fluctuations have the effect of giving the whole economic structure a good shake-up and keeping the system reasonably flexible and mobile. With the business cycle eliminated there would not be the periodic rubbing down, so to speak, which gives industry a fresh lease on life. Depression, like a cruel and heartless tyrant, clubs down the impossible demands made by the employed agents of production, until the earnings of the factors have again reached a point at which full employment becomes profitable. With the business cycle ironed out, it can scarcely be doubted that the price and wage structures would become more rigid. The capacity to absorb labor displaced by technological innovations would therefore be reduced.

The conclusion is that we cannot afford to assume a too easy optimism with respect to technological unemployment. The increasing rigidity of modern economic life consequent upon price and wage controls—*Die gebundene Wirtschaft*, as the Germans so aptly put it—points in the direction of a slackening in the rate at which displaced labor can be reabsorbed into employment. Moreover, should we prove unable to prevent a downward price trend in the next decade or two this growing tendency toward rigidity would become a still more serious matter and the problem of technological unemployment would be intensified.

THE MEASUREMENT OF PRODUCTIVITY CHANGES AND THE DISPLACEMENT OF LABOR

By HARRY JEROME
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Let me distinguish at the outset four closely associated concepts: (1) the personal efficiency of the worker; (2) the average productivity of the worker—the ratio of output of product to the input of labor, regardless of the causes which may determine the size of that ratio; (3) labor displacement, meaning a shrinkage in the number employed in a given process, occupation, plant, or industry; and (4) technological unemployment; that is, unemployment which is due to labor displacement arising from a change in methods or equipment.

To illustrate these concepts, let us assume one hundred miners working in two groups of fifty each and cutting and loading five hundred tons of coal per day in each group, using hand tools. The men in Group A are stronger, more experienced, and more diligent workers—their personal efficiency is higher than that of the men in Group B—but the coal in their section of the mine is less accessible. Hence the productivity rate (ten tons of coal per day per man) is identical for the two groups. Now assume the management equips Group B with mechanical coal loaders and that with their aid twenty men can turn out as much coal as fifty with hand loading. Productivity has increased, but if the mine operator continues to employ the entire crew there is no labor displacement for this mine. However, if he lets thirty men go, because twenty can do the work formerly requiring fifty, then the increased productivity has caused labor displacement. If the thirty discharged men promptly find other work, there is no technological unemployment. But if they are either temporarily or permanently out of work because of the introduction of the mechanical loaders, to that extent technological unemployment has been created.

For present purposes, we are concerned, not with the measurement of personal efficiency or changes therein, but with labor productivity, labor displacement, and, by implication, unemployment arising from displacement. The distinction between these terms is not merely academic. The employer and the consumer are concerned primarily with increasing labor productivity and its effects on the costs and prices of goods. But the factory worker is concerned, directly at least, with labor displacement and technological unemployment.

I must not take the time to elaborate the many refinements which are possible, but let me suggest parenthetically that if the purpose of measuring productivity is to provide a yardstick for the net efficiency of our industrial system in delivering goods to the final consumer, then we

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should calculate, not merely the customary gross productivity—the ratio between output and employment in, say, only the fabrication stage—but an adjusted productivity rate.

This adjusted rate would take into consideration the labor embodied, so to speak, in the buildings, machinery, and materials used, and also the labor required in marketing the commodity. It is entirely conceivable that a mass production technique involving a large market for its successful use, may increase the labor-time costs of marketing and transportation enough to offset gains in the manufacturing process.

What problems of measurement arise in connection with these several concepts? From the point of view of formulating an intelligent program for rationalizing industry, we may state them as a fourfold problem in forecasting:

1. To forecast the technological changes which are probable for an industry.
2. To forecast the effect of such changes on labor productivity.
3. To forecast the effects on labor displacement of the expected changes in productivity.
4. To forecast the extent to which the expected labor displacement will result in technological unemployment.

Concisely stated, the keynote of current economic discussion is planning; the essential element in planning is forecasting; and the basis of forecasting is experience. Our first step, then, is the study, and, if possible, the measurement, of past experience in the field of technological changes and their effects. Until recent years this field of research was, with a few noteworthy exceptions, uncultivated. Enough has now been accomplished, however, to mark out some main avenues of approach.

The Index Number Approach. First, we have, for industries as a whole, the index number attack on the measurement of changing productivity, pioneered by Clague in his studies for the Bureau of Labor Statistics, in iron and steel, automobiles, shoes, sugar, and several other industries.¹ By the simple device of dividing an index number of production by an index of employment, adjusted where possible for changes in hours, he obtains indexes of labor productivity.

Such approximations, made for an entire industry, are useful in hinting the major trends in productivity, but they do not go far enough. They suggest little or nothing of the causes of changing productivity, nor its effects in terms of labor displacement or unemployment. They do not show whether the rising level of productivity is ascribable to improvements in which all plants have shared more or less equally or merely to the result of a ruthless elimination of less efficient plants. They afford

¹ *Monthly Labor Review*, July, 1926, pp. 1-19; October, 1926, pp. 10-21; November, 1926, pp. 30-40; and January, 1927, pp. 35-49.

little clue as to whether the movement measured has about run its course or is just gaining momentum for still more rapid progress.

Case Studies of Individual Plants. A step toward more intensive analysis is found in the researches which endeavor to throw light on the productivity history of an industry by examination of the output and employment records of individual plants over a period of time. Miss Jamba's study of a New England cotton mill, from 1838 to 1925, was a pioneering effort of this type.² The merchant blast furnace survey by Clague and Givens for the Bureau of Labor Statistics is an excellent example of the individual plant method applied to a substantial fraction of an industry.³ Somewhat similar studies of historical changes in productivity, and accompanying changes in technique, have been made by the National Bureau of Economic Research for a number of industries such as cement, sugar, lumber, and brick, but are as yet unpublished.

By tracing the productivity history of individual plants for a substantial fraction of an industry, tendencies not discoverable from the consolidated record for the industry as a whole should be revealed. The record promises to be even more useful if made by departments and if the measurement of productivity changes can be accompanied by the measurement, or at least the description, of companion changes in dollar investment in equipment, per cent of idle plant time, changing grade of workers, and other factors having, presumptively, a bearing on productivity.

If the scope of the survey is to be extensive, the necessary research can probably be carried on most effectively by a governmental agency or under the auspices of an industrial association of some sort; or, better yet, by co-operation between the government and a trade association.

However, many profitable studies can be carried on by more or less free-lance researchers, if they work in fields sufficiently limited so that they can conduct the survey personally or with the help of a limited number of closely supervised assistants. Such studies pave the way to projects on a larger scale and are particularly useful in the early stages where the technique of investigation is being developed, or problems peculiar to a small industry or a single locality are involved. A large-scale investigation must almost necessarily use standardized methods which are not readily adapted to special conditions; the small-scale worker can adapt his methods more closely to the peculiarities of the particular situation in which he is working.

Where it is impracticable to ascertain both the chronological and comparative aspects of productivity differences, valuable data are yielded

² Anne Jamba, "Productivity of a New England Cotton Mill, 1838-1925," *Monthly Labor Review*, October, 1926, pp. 21-32.

³ *Productivity of Labor in Merchant Blast Furnaces*, United States Bureau of Labor Statistics Bulletin No. 474.

by surveys which are restricted to revealing comparative productivity rates at a given time of plants varying in size, in methods, or in equipment. The glass industry study by Boris Stern, for the Bureau of Labor Statistics, is an excellent example of this type.⁴

At best, however, neither studies of comparative productivity nor period-to-period records of changing productivity in representative plants, unless supplemented by case studies of discharged men, contribute direct material for the measurement of technological unemployment.

Despite this limitation, if we are to look forward hopefully to a time when we can anticipate the degree and effects of changes in industries, we must have many closely analytic studies of separate industries, conducted, if possible, with the full co-operation of the industry, and having as their object the determination of any observable regularities in the way in which technological changes take place. It is frequently said we cannot anticipate what inventions will be made. That may be true, but I think we will find, when adequate study has been given to the problem, that as a general rule innovations go through a certain typical life history, with a relatively slow growth in the early stages, so that a trained observer could frequently detect a promising innovation before its commercial adoption has become general and prophesy with fair success the trend of its adoption in the future.

My general thesis is that we shall be in a much better position to understand how technological developments take place, and hence to forecast future tendencies in labor displacement, when we have traced as best we can, industry by industry, or even process by process, those changes in productivity and displacement which have taken place in the past and the other concurrent changes in industry which accompanied, and in part, at least, account for, developments in productivity and displacement.

Measurable Aspects of Production Operations. What are these measurable aspects for an individual plant, or industry, which may be historically traced, as at least a partial guide to the future?

The first is obviously output. Preferably in simple and reasonably comparable units, such as pounds of sugar or tons of coal; otherwise, in a composite index of production, less exact, it is true, but useful if carefully weighted.

Secondly, employment, preferably both in number of men and in man-hours. The number of men is most useful in studies of labor displacement; man-hours, in studies of changing productivity. An increasing number of plants are keeping records in terms of man-hours. In some states this is encouraged by legislation basing payments to workmen's compensation funds on hours of labor time.

⁴*Productivity of Labor in the Glass Industry*, United States Bureau of Labor Statistics, Bulletin No. 441.

A challenge is presented to the statistician by the skill displacement aspect of technological change. How, if at all, can we measure the effect on the grade of labor required when numerous occupations are involved? In many instances, a direct count of the numbers in specific occupations before and after the change will afford useful evidence of the effect on skill requirements. But is it not possible to construct some sort of an index of skill requirements? Though recognizing some of the limitations, I throw out the suggestion that we may profitably experiment with the computation of an index of changing skill in an industry, based upon the number of workers in the various occupations and the ratios of the hourly earnings in the specified occupations to the earnings of common laborers in the same industry and locality. To the extent that earnings are a measure of skill, a decline in such an index would represent a declining spread between the average skill in the industry and that of the common laborer.

Of considerable promise as a method of analyzing skill displacement are detailed job analysis surveys of the type being conducted as part of the Minnesota unemployment research project.⁵ The training and skill required for each operation in the plant is noted. Then the survey is to be repeated after an interval sufficient to permit technical changes to occur and to warrant conclusions concerning their effect upon the skill required.

Obviously this method cannot be extensively applied, except by factory executives themselves as a method of self-analysis, but even on a limited sampling basis, it should furnish valuable aid in appraising the effects of technological changes.

When it comes to the problem of measuring the causes of changing productivity, rather than their effects on output or on labor time, the task becomes more difficult, but there are some measurable aspects and an effort should be made to measure them.

Changes in horsepower as a measure of changing mechanization is a familiar concept. Professor Willard Thorp has pointed out some of the limitations of this measure.⁶ In addition, we often can profitably measure the rapidity with which a given device, rather than power in general, is put in use. This measurement may be either in terms of number of machines, fraction of workers using the given method, or fraction of output produced thereby.

Nor is it inconceivable that we can for some plants and industries work out a measure of total investment in plant and equipment as a basis for comparing average capital productivity or output per unit of capital

⁵ Russell A. Stevenson, *The Minnesota Unemployment Research Project*, University of Minnesota Employment Stabilization Research Institute, Vol. I, No. 1.

⁶ Willard Thorp, "Horsepower Statistics for Manufacture," *Jour. Amer. Statistical Association*, December, 1929, pp. 379-385.

goods, analogous to labor productivity. The difficulties are great—in the way of proper allowances for depreciation, obsolescence, and purchase at varying price levels—but they are not necessarily insurmountable.

Another measurable phenomenon which might throw light on the causes of changing productivity and the nature and causes of difficulties in our industrial system is an index of equipment idleness. We have endeavored, with some degree of success, to measure fluctuations in the utilization of labor. Of almost equal significance for an understanding of the nature of industrial operations is a measure of the utilization of equipment. For what fraction of time is equipment in use? What fraction of capacity is idle even at the peak of activity? We have beginnings of such measures in the statistics of active cotton spindles and of idle cars, and in the estimates of "per cent of capacity at which operated" now published for a number of industries. For steel castings, the published figure for September of 1931 was 28 per cent. What would a composite index of equipment idleness for all industry show? Further evidence along these lines should go far to furnish a sounder basis for analyzing the problem of overcapacity.

Market Factors. The aids to the estimation of labor displacement which I have mentioned arise primarily in the production process. Production, of course, is contingent on markets; and additional aids to forecasting may be obtained from an analysis of the market for commodities. Professor Douglas has laid the foundation for research in this field in his analysis of coefficients of value flexibility. As an aid to forecasting to what extent technological improvements will result in an expanded market and to what extent in labor displacement, he proposes the determination for many commodities of coefficients of flexibility of value through time.

These coefficients may be briefly described as fractions of which the numerator is the change in the index of the price of a given commodity, deflated by the index of the general price level, and the denominator is the change in the index of quantity for the given commodity, deflated by the index of quantities of all goods and services.

If this approach can be made to contribute significantly to the forecasting of labor displacement, Professor Douglas, with his capacity for statistical pioneering, will doubtless make it yield those contributions.

I think I can see substantial, if not insuperable, difficulties in the use of coefficients of flexibility of value as aids to displacement forecasting. Adjustments of price to expense of production are at best imperfect and slow. Labor-saving changes usually precede any resulting price changes; and, in the meantime, the labor displacement may have taken place. For many commodities coefficients of flexibility of value cannot be computed;

and at best indexes with a substantial margin of error must be used in their construction. Perhaps the most important limitation upon their use is the fact that only in somewhat exceptional cases does the particular type of labor affected by a technological change bulk high in the total expense of the final product. On the average the direct payment for wages in manufacturing constitutes only about 40 per cent of the value added in manufacturing, not to mention the expense for materials and for marketing. Changes which affect only one manufacturing operation ordinarily lower the unit expense for the final product only a small fraction of the total cost; and, consequently, any effect which a labor-saving change may have on the expansion of markets through a lowering of price is not apt to be commensurate with the reduction in the labor required in the operation immediately affected.

These difficulties in the use of coefficients of flexibility of value are cited, not because I think attention should not be given to the degree of elasticity of demand of products, but because I wish to stress the point, that while the particular method of attack suggested by Professor Douglas should be given full consideration and trial, no reasonable expectation of aid from that quarter should blind us to the necessity of assembling all other available aids to the task of analyzing the causes, character, and effects of impending technological changes.

Technological Unemployment. None of the types of studies previously mentioned go directly to the problem of technological unemployment. An index of productivity, or a period-to-period record of the number of men employed in various plants or industries may indicate displacement and possibilities of unemployment but do not furnish certain evidence thereof. For such purposes we must turn to surveys of the individual case study type, such as those made by Lubin, for several hundred discharged workers in Chicago, Baltimore, and Worcester; by Myers, for skilled cutters in the Chicago garment trade; and by Clague, for the workers displaced by the closing down of a New Haven rubber plant.⁷ These studies trace the actual unemployment experience of workers whose jobs were lost through technological change. It is only thus that we can ascertain with a reasonable degree of certainty whether men who are released from one plant or industry customarily find employment, and prompt employment, in other plants or industries. Such studies, though of necessity small samples, furnish valuable clues for interpreting the probable effect of increases in productivity and labor displacement.

The greatest promise of co-ordinated information for the group of

⁷ Isador Lubin, *The Absorption of the Unemployed by American Industry*, Brookings Institution, 1929; R. J. Myers, "Occupational Readjustment of Displaced Skilled Workers," *Jour. Pol. Econ.*, August, 1929, pp. 473-489.

problems we are considering is afforded by surveys which combine for a limited geographical and industrial area, over a substantial period of time, both the study of changing technology and labor displacement in representative plants and the subsequent industrial history of the men thus displaced.

To my knowledge, the nearest approach to this type of survey is the scholarly study of technological change and labor displacement made by Miss Baker for the commercial printing industry.⁸ In this industry, with a highly diversified product, she has been able by an analysis of selected plants, the records of machine sales, and other collateral data, to point out certain major tendencies in the technological changes affecting the industry and how these changes are affecting the market for different classes. In a limited way, also, she has endeavored to ascertain what happened to the individual workers displaced.

If adequate effort is concentrated upon the appropriate research, I believe it may become quite possible for a group familiar with the peculiarities of a given industry and with the discoverable characteristic stages in the evolution and application of technical innovations, to forecast within reasonable limits of accuracy what effect impending changes will have on the labor requirements in the industry. Occasionally we have sudden, unexpected developments, such as the rapid introduction of the "talkies" and the consequent elimination of approximately 50 per cent of the musicians in moving-picture houses. But such rapid changes are exceptions. The great bulk of technological changes are slower, less sweeping in their effects, and better adapted to remedial action.

Need for Compilation of Additional Data by Individual Plants. If in the future we are to gain adequate knowledge along the lines suggested, certain steps are necessary in the basic compilation of data. The key to adequate statistics of labor productivity and labor displacement is the compilation of a large number of individual plant histories on a standardized basis. Farsighted associations of manufacturers, or other interested organizations, might well start a campaign for the development of standardized methods of recording and reporting plant histories. Such records would include the following items:

1. Output per month and per year, in standardized quantitative units if possible. If not, at least in dollar terms, subject to deflation by the best available price index for the industry.
2. Employment in terms of men and man-hours.
3. Classification of employees by occupation on a standardized basis, co-ordinated if possible with the terminology of the census of occupations.
4. Separations, classified by occupation, age, and cause of separation.

⁸Elizabeth Baker, "Unemployment and Technical Progress in Commercial Printing," *Amer. Econ. Review*, September, 1930, pp. 442-466.

5. Plant-hours; that is, plant operating time; and also, machine-hours for a selected list of major types of equipment.

6. New investments in plant and equipment, conceivably with adjustments for variations in price level at time of purchase, and, if cumulated, for depreciation and obsolescence.

7. A record of the introduction and extent of use of selected processes or equipment, with the selection made by a special committee for the industry. The items selected would be those representing the technological changes deemed of most importance to the industry from a labor displacement point of view. In coal mining, for example, this might take the form of the number of mechanical coal loaders installed and the fraction of coal loaded with their aid.

8. A descriptive statement, at least, of other major changes believed by the management as apt to affect labor productivity. The difficulty here, of course, is that much of this would be considered confidential.

It may seem visionary to suggest such an ambitious program of record keeping and reporting to industry organized on a competitive basis, with each unit interested in getting the jump on the balance of the industry. I am, in fact, none too optimistic about a widespread actual adoption of the program suggested. Perhaps we should concentrate upon the effort to get adequate records of output and employment in terms of man-hours, postponing the drive for the other types of data. This, however, is but a counsel of caution arising from the fear that if we ask for all that is needed, we may get nothing at all.

LINES OF ACTION, ADAPTATION, AND CONTROL

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A recent survey by the Mellon Institute indicates that there are approximately 1,000 industrial research laboratories in the United States, and that these laboratories employ over 16,000 scientists and possess an annual budget in excess of \$100,000,000 a year.¹ This does not include the less formal research performed by the engineering departments in thousands of enterprises. Forty years ago industrial research was almost nonexistent. During the last decade the number of laboratories increased about 60 per cent. It is safe to predict that industrial research will continue to grow by leaps and bounds, because business enterprises are perpetually striving to outdo each other in achieving economies and in improving their products.

Plainly ours is a society committed to rapid industrial change—one might almost say dedicated to it. Not only is change an important method of making profits, but the government has added to its effectiveness by the patent system which gives innovators monopoly rights in their inventions. Unfortunately competition affords no method by which the benefits of innovations can be balanced against the costs, because both the benefits and the costs fall in large degree upon the community at large rather than upon those who decide whether or not changes shall be made. Whether or not change occurs at the most economical rate, rather than too fast or too slow, is sheer accident.² Competition may compel enterprises to rush through enormously expensive changes which are of relatively little benefit to any one, because, if they do not promptly adopt the new methods, rival firms which do will capture the market. In so far as the costs of change fall upon the community at large—upon those whose property or occupations are rendered obsolete—rather than upon those who make the innovations, change is being subsidized just as much as if Congress appropriated millions to accelerate it. This enormous subsidy, which is woven into our very institutions, is one of the outstanding economic facts of the age. It means, of course, that the cost of change tends to be excessive and that many changes occur at an uneconomically rapid rate. Inevitably the questions arise: What shall we do about the tremendously powerful dynamic forces which our institutions have released? What steps ought we to take to guide and

¹ E. R. Weidlein, "Industrial Changes Due to Chemistry," *Annals of the American Academy of Political and Social Science*, September, 1928, CXXXIX, 32.

² The inability of the competitive system to effect an accurate balancing of the costs and the benefits of change is perhaps the strongest argument in favor of communism or some form of socialism.

control them? Is it wise to subsidize change on such a vast scale? How can the cost of change be kept at a minimum and the rate of change prevented from being either uneconomically slow or uneconomically rapid? In a world which is as highly dynamic as ours, can adjustments to changes be trusted to work themselves out or do they need to be guided and assisted? And if they need to be assisted, how can this be done most effectively? In short, we face the basic problem of developing economic institutions which will work reasonably well in a society which is highly dynamic and which is likely to become more so. Obviously the problem has wide ramifications, for it involves the protection of all classes in the community—land owners, owners of industrial equipment, owners of securities, and wage earners—against the consequences of too rapid change. This paper will discuss only a small segment of this general problem; namely, the protection of wage earners against industrial change.

Returns of the unemployment census indicate that less than 6 per cent of the unemployed attribute their idleness to causes which fall under the general heading of "technological unemployment."³ It would be a mistake, however, to infer that the displacement of labor is not a serious problem, because the occupational statistics for agriculture, manufacturing, mining, and transportation show plainly that changes in technique and markets have produced displacement on a large scale. The results of the unemployment census are explained partly by the fact that many changes in technique and shifts in demand produce idleness, not by increasing the lay-off rate, but by decreasing the hiring rate and partly by the fact that many dismissals, which are fundamentally due to labor-saving devices, appear to the workmen to have been produced by seasonal or cyclical causes.⁴

Economists have usually regarded the problem created by technological changes simply as one of helping men adjust themselves to changes in the kind and the location of jobs. This conclusion has rested upon the extraordinarily optimistic assumption that each labor-saving device, by reducing the cost of producing goods, releases exactly enough purchasing power to create a new job for every one which it destroys. This idea is sometimes expressed by saying that technological changes do not create permanent unemployment. But why should we assume that the purchasing power released by labor-saving devices creates exactly enough

³ The title used by the census to cover unemployment caused by labor-saving devices, mergers, etc., is "industrial policy."

⁴ Labor-saving methods that are adopted during the busy season or during a business boom may produce no immediate lay-offs, but, after the busy season ends or the boom subsides, the force shrinks more than it otherwise would. To the men who are laid off, their dismissal appears to have been due to seasonal or cyclical causes.

new jobs—no more, no less⁵ It is elementary that each technological change creates a new situation with respect to both the supply of labor and the demand for labor. On the supply side, it may release older men from employment and on the demand side increase the need for younger men. Or perhaps it releases men who are capable of doing heavy and fatiguing work and increases the demand for women workers who have deftness and speed. In any event, the existing wage rates are rendered more or less obsolete, for the rates which formerly brought supply and demand into equilibrium no longer do so. Some rates may be too high; others, too low. More than this, however, the wage structure as a whole may be either too low or too high. As a matter of economic theory one cannot assert that it will necessarily be one or the other, but it is important for us to see why labor-saving inventions are likely to render the general level of money wages too high. Such inventions often reduce the cost, and hence the price, of capital goods. Inventions of this kind are likely to necessitate a drop in the money wages of many classes of labor. Otherwise it would pay enterprises to use such a large proportion of capital and such a small proportion of labor in production that the number of jobs would increase less rapidly than the number of job seekers. Wages, however, are a sluggish price—slow to rise and as slow to fall. When technological improvement reduces the price of capital goods, money wages are likely to remain about the same and industry's demand for men is likely to fall below the supply. In other words, in a society in which technological progress is causing prices to fall, the sluggishness of money wages may cause real wages to rise too rapidly.⁶

What actually happens depends largely upon whether independent monetary conditions are causing the general price level to rise or fall. If prices are rising, the tendency for technological progress to cause real wages to advance too rapidly is counteracted by the tendency for money wages to lag behind other prices. On the other hand, when the price level is falling, the tendency for technological improvements to increase real wages too rapidly is reinforced by the tendency for wages to fall less

⁵ It is easy to postulate conditions under which more than enough purchasing power would be released.

⁶ Temporarily, while the proportion of capital to labor is being rapidly increased, there may be substantial growth in the demand for labor, because men are required to make the capital goods needed to increase the proportion of capital to labor. But the number of jobs is soon likely to become insufficient to absorb both the displaced men and the normal increase in the labor supply, because it is possible to increase the proportion of capital to labor by dropping men as well as by adding capital. The decrease (or the slower increase) in the number of jobs occurs in several ways. New plants which attain low costs by using a large proportion of capital and a low proportion of labor threaten the markets of older enterprises which employ a large proportion of labor. Under the pressure of competition some of the older concerns discover many opportunities for getting rid of men. Other concerns are less successful in reducing expenses and lose much of their business to the newer, low-cost enterprises. Still other old concerns cease operation altogether.

rapidly than prices in general. Under these conditions, unemployment may be serious and chronic. In fact, displacement may become more or less cumulative, because the tendency for falling prices and technological progress to leave money wages too high stimulates managers to search more vigorously than ever for ways of economizing labor. As they succeed and as competition compels them to pass on the savings in lower prices, the disparity between wages and other prices widens and the incentive to discover ways of displacing men grows still more compelling.⁷

If technological change affects the number as well as the kind and the location of jobs, a program for dealing with it naturally falls into two principal parts: (1) a program for adjusting the labor supply to changes in the kind and the location of jobs; and (2) a program for preventing labor-saving devices from retarding too much the growth in the number of jobs. First let us consider the problem of adjusting the labor supply to changes in the kind and the location of jobs. There are three general ways of dealing with this problem: (1) retarding the rate of displacement; (2) encouraging the transfer of displaced men within plants by employers; (3) providing better facilities in the labor market for transferring the displaced men between plants and localities.⁸

⁷ Something of this sort appears to have been happening in the United States between 1920 and 1929. During that period, the average price of producers' goods fell by about one-third, but money wages in manufacturing, as measured by hourly earnings, slightly increased. (The Bureau of Labor Statistics dropped the classification "producers' goods" in its index of price movements in 1927. The statement that the average price of producers' goods in 1929 was about one-third below 1920 is based on the assumption that there was no significant change in the average between 1927 and 1929. The fact that there was practically no change in the averages of raw materials, semimanufactured goods, or finished products between 1927 and 1929 indicates that this assumption is undoubtedly correct.) In other words, a radical change in the relationship between wages and the prices of capital goods gave employers a tremendous incentive to discover ways of economizing labor and led them to reduce the number of factory employees by 500,000. It also drove out of business thousands of small concerns which used a large proportion of capital. Even during the relatively prosperous years of 1923, 1924, 1925, and 1926, the failures among the American manufacturers exceeded those of 1921, a year of severe depression. And although the number of factories had been steadily increasing up until 1919, it dropped over 17,000 in the decade 1919-29. A more detailed discussion of the effect of price movements upon employment is contained in my paper, "Market Shifts, Price Movements, and Employment," *American Economic Review*, Supplement, March, 1929, XIX, 1-22.

⁸ Space does not permit a discussion of the contribution which trade unions might make to solving the problem of technological unemployment. One might expect that trade union history would reveal many successful attempts to reduce the impact of technological changes and to help union members adjust themselves to new conditions. As a matter of fact, this is precisely what one does not find. A few exceptions stand out, conspicuous because they are exceptions, such as the oft-cited experience of the Typographical Union with the linotype machine. In most cases, the first reaction of unions to technological changes is to attempt to protect their members against displacement by discouraging the introduction of new methods into union shops and to make work for displaced workers by enacting restrictive rules. Unfortunately, after embarking upon a policy of opposition and restriction, unions find great difficulty in shifting to a policy of guidance and control.

During recent years a heavy displacement of labor has been occurring in the rail-

It is clear that, the slower the rate of technological change, the greater is the possibility of absorbing a shrinkage in the working force by the normal labor turnover. If, for example, the combined resignation and discharge rate in a certain occupation is 25 per cent a year, new methods which dispense with half the force may be introduced without producing many lay-offs, provided the change is spread over two years.⁹ It has been pointed out, however, that, under existing economic arrangements, labor-saving devices tend to be introduced too rapidly because the cost of adopting them falls, in large measure, not upon the enterprises which introduce them, but upon the rest of the community. An obvious way to prevent change from occurring too fast is to assess a larger part of the costs against the enterprises which reap the benefits and one way of doing this is to require every concern to pay a dismissal wage to each man whom it permanently lays off.¹⁰ A dismissal wage would be helpful, of course, in assisting workmen to shift to other occupations, but its real importance would consist in the fact that it would correct a serious flaw in our social cost accounting and would encourage managements to reduce lay-offs to a minimum. The principle of the dismissal

road industry and it is likely to continue. This is an industry in which unions are more or less strongly entrenched. During the immediate future we should have an opportunity to learn, from the actions of the railroad unions, what strong and well-led organizations can do to ease the burden of technological unemployment. Up to the present, the accomplishments of the railroad unions in dealing with the problem have been limited. Two important things, however, have been achieved. In the first place, some unions have organized the shifting of men from one part of the country to another. Most notable is the employment bureau of the trainmen's union in Chicago through which roads needing new trainmen can draw on furloughed trainmen in other parts of the country. On a smaller scale something of the same sort has been done by the shopmen's unions. In the second place, the seniority rule of the railroad unions has been of great value in concentrating the burden of displacement upon the junior men, who, in most cases, are best able to shift to other occupations. It is safe to say that, in the absence of the seniority rule, much displacement would have occurred among the older men and that this would have brought acute distress, because most of them would have been unable to find steady work in other industries. Grave as is the unemployment problem in railroading, it is infinitely less serious than it would have been were the seniority rule not in existence.

⁹ If the resignation and discharge rate is 25 per cent, why could not the new methods be introduced without producing any lay-offs, provided they were spread over two years? For the simple reason that most resignations and discharges occur among newly hired men. Consequently, a labor-saving change which practically eliminates the hiring of men in a certain occupation also reduces the number of resignations and discharges. Although the annual resignation and discharge rate may have been 25 per cent as long as each resignation or discharge led to a hiring, the rate would drop far below 25 per cent as soon as replacement ceased.

¹⁰ It is not possible to estimate in each individual case the cost of a lay-off to the workman. Consequently, it is desirable to pay a standard dismissal wage to all men who are laid off. The amount should vary with the workman's length of service. This would give employers an incentive to retain long-service employees who would probably have most trouble shifting to new occupations or industries. Employees of less than six months' service should receive no dismissal wage. A question of considerable importance, especially from the standpoint of problems of administration, is whether the dismissal wage should be paid to any men who are discharged for cause. Space does not permit a discussion of it here.

wage has long been accepted by business, for it has been customary to pay several months' salary to important executives who are laid off or discharged. During recent years a handful of enterprises (less than eighty in all) has extended the dismissal wage to a few long-service manual laborers. But the dismissal wage is not likely to be adopted on a wide scale unless it is made compulsory. Unfortunately authority to require the payment of dismissal compensation is divided among the legislatures of forty-eight states. In order to encourage the states to act and also to encourage individual enterprises to act in advance of the states, it would be desirable for the federal government to permit corporations which establish reserves for the payment of a dismissal wage to count a part of their contributions to such reserves as a credit on their federal corporate income tax payments. The credit should not be given, of course, unless the funds were vested in independent trustees, and, consequently, the reserve funds should be registered with and approved by the Treasury Department. It would be reasonable to give a credit of fifty cents on the corporate income tax for each dollar contributed to an approved reserve fund.¹¹ Such a credit would cut the cost to the corporation in half.

A second way of preventing the displacement of men by technological changes is to encourage their transfer to other work in the same plant. Here we encounter another grave flaw in our economic arrangements, for employers at present have no adequate incentive to make transfers. And again the dismissal wage furnishes the needed incentive. Experience has demonstrated that, when a thorough search is made for jobs which men with given qualifications can fill, a surprising number will often be discovered. Especially noteworthy is the success of the Western Electric Company in finding work which various classes of handicapped men can perform as well as non-handicapped workers. But searching carefully for jobs to which displaced men might be shifted is not enough. A real effort should be made to create opportunities for transfer by adapting either the work to the men or the men to the work. There is no reason, for example, why we should not use our mastery of science to create the kinds of positions which the labor supply requires. Of course, the market itself provides an incentive to adapt technique to the labor supply, because when a class of labor becomes superabundant and cheap, it pays to invent machines which such labor can operate. When thousands of unskilled European peasants flooded this country and waited for work at every factory gate, engineers soon discovered how this cheap labor could be used to make scores of more or less complicated commodities. But

¹¹ It might be advisable to limit the credit to a certain portion of the tax paid by the corporation. Credit should be allowed also on all payments by corporations into reserves against unemployment, provided the reserves are vested in independent trustees and meet other general requirements imposed in the interest of the beneficiaries.

surely it is not a satisfactory situation when technique is not altered in response to a surplus of men until that surplus has become conspicuously large and represents a grave problem of unemployment. There is need for a method of making technique adjust itself more promptly and in a more selective manner to the labor supply. Such a method is provided by the dismissal wage. Rather than pay \$200 or \$300 to men who have been displaced, it would often be more economical for the employer to reorganize some department or to develop jigs, fixtures, and mechanical aids so that these men could be transferred to other work.

More promising than the adjustment of technique to men is the adjustment of men to technique. In a society as dynamic as ours, it is important that workers be reasonably versatile. Unfortunately industry, instead of producing versatile employees, goes out of its way to develop narrow specialists. Furthermore, the wage payment systems which are in general use, such as piecework and bonus and premium plans, make the men themselves prefer to specialize narrowly and even cause many of them stubbornly to resist efforts to give them a broad training. The establishment of a dismissal wage would give employers a badly needed incentive to develop general-purpose men who can be shifted to other departments or other work when changes occur. It would also encourage employers to retrain men. In order to give the maximum incentive to retrain, it would be desirable to permit enterprises to pay the cost of retraining by drawing on the reserves which are accumulated to provide for dismissal compensation. In other words, these reserves should not be purely dismissal compensation reserves but they should be dismissal compensation and retraining reserves.¹²

The operation of a dismissal wage raises many important problems, which there is not time to discuss. It has been pointed out that reserves should be accumulated in order to assure that dismissal compensation will be paid. These reserves should be created in such a manner that the employers' incentive to prevent lay-offs will not be dulled. In order to encourage enterprises to concentrate lay-offs among the younger employees who, as a rule, can adjust themselves most easily, the dismissal wage should increase with the length of service. A problem of great difficulty arises when a worker refuses to accept the management's offer to transfer him to another job. In case this refusal necessitates his dismissal, should he receive dismissal compensation either in whole or in part? Possibly the job which he rejected pays much less than he has been accustomed to earn. In this case his claim for dismissal compensation would seem to be a strong one. But possibly the job pays almost as much as he has ever earned. In this event his claim seems weak. But where and by

¹² The amount that might be withdrawn to pay for retraining a given man should be limited, of course, by the dismissal compensation to which he is entitled.

whom should the line be drawn? A dismissal wage, if improperly designed and administered, will create an incentive for workers to refuse to be transferred. And what is the good of encouraging enterprises to make transfers if, at the same time, we encourage the men to refuse them? The successful operation of a dismissal wage will depend in large degree upon the skill with which this problem is solved.

But although a dismissal wage is an important method of correcting our system of social cost accounting and although it furnishes employers with a much needed incentive to avoid displacing men, it is not enough. It would not prevent many technological improvements from being adopted at an uneconomically rapid rate. Furthermore, one of the principal ways in which technological changes produce unemployment is by forcing old and obsolete plants to shut down. The whole forces in such plants present a transfer problem. Any society which is highly dynamic and which uses highly specialized labor needs efficient facilities for placing the thousands of men whom industry is constantly throwing on the market. The more dynamic the society and the greater the degree of occupational and territorial specialization, the greater the need for a well-organized labor market.

But precisely what facilities are needed? Let me say emphatically that efficient public labor exchanges, although of great importance, are far from enough. The problem of keeping the labor supply adjusted to the changing requirements of industry is far more than a matter of sending unemployed men to the vacancies for which they happen to be fitted. In fact, in so far as technological changes displace certain types of men and create a demand for other types, the labor supply will probably not correspond closely to the demands of industry. Consequently, the problem of keeping the labor supply adjusted to the ever-changing demands of industry is partly a problem of showing employers how they can use more of the types of men who happen to be available; it is partly a matter of inducing employers themselves to explore the possibilities of using more of these types; it is partly a matter of discovering the occupations to which the surplus men can most easily be shifted; and it is partly a matter of inducing employers, trade unions, or communities to retrain the displaced workers for new employments.

These are to some extent problems of research and they are to some extent problems of inducing action on the part of industry. They require, therefore, an organization capable both of doing research and of creating co-operation.¹³ This need could be met by the establishment of a

¹³ In the state of Massachusetts, for example, workers are being crowded out of the textile and the shoe industries, but the manufacture of women's garments and, in less degree, men's garments is growing. To what extent, if at all, does there exist the possibility of transferring workers from the textile and the shoe industries into some branch of the clothing industry? Obviously this question can be answered satisfactorily

federal labor board composed of six or seven industrialists and labor leaders with possibly the secretary of commerce and the secretary of labor as *ex officio* members. The board would be provided with a research staff and connected with industry by a national advisory committee. The federal employment exchanges would be transferred to the control of the board, which would be provided with funds for expanding their services.¹⁴ In addition, it would be given an appropriation to subsidize projects in vocational retraining.

How would the board proceed? Every technological or geographical change presents, in large degree, a unique problem. The number and kind of men who are displaced and the alternative employments for which they are best qualified are never the same. As soon as it became evident that a new machine or a geographical shift would displace labor on a substantial scale, the change would be the subject of intensive study by the technical staff of the board. How many men are likely to be displaced and how rapidly? How can the influx of young workers into the shrinking occupation be promptly stopped? How can employers who need men in the occupation obtain them from other enterprises which are laying off men? Into what other pursuits can the displaced men be most advantageously transferred? What training should they receive before being shifted and how and by whom should it be given? The technical staff would prepare a tentative plan which would be submitted by the board to the industry. After receiving criticisms and suggestions, the board would prepare a revised plan which it would ask the industry to accept. The board would, of course, have no power to compel acceptance of its recommendations. Its effectiveness would depend upon the reasonableness of its suggestions and the respect which its members, by virtue of their ability and fairness, would be able to command.

There is, however, one important legal tool with which the board might be equipped. That is power to attach conditions to patent grants for the purpose of protecting men against displacement. No one will question the general policy of encouraging invention by giving patents to inventors, but if the government grants a patent, surely it is fair to require that reasonable steps be taken to avoid unnecessary displacement of labor. Whenever it appears that a new invention is likely to create a serious problem of displacement, it should be the duty of the patent office to refer the matter to the federal labor board and of the board, after investigation, to draw up reasonable rules for the protection of labor. The board should also be authorized to intervene on its own initiative in case

only after special investigation. This means research. After research has supplied the answer, industry must be persuaded to co-operate in assisting the transfer. Possibly the communities and trade unions must be induced to help.

¹⁴ If the federal government co-operated with the states in providing a joint federal-state employment service, the federal grant-in-aid would be administered by the board.

an invention appears to threaten serious displacement. The patent should be granted only in the event that the applicant accepts, both for himself and for his licensees, the reasonable requirements of the board. In particular, patents which are likely to produce serious displacement should not be granted unless the applicants agree both to provide a reasonable dismissal wage and to co-operate in providing reasonable facilities for retraining the displaced men.

Permit me to add a word about the problem of vocational retraining and the federal labor board's relation to it. At present, we have practically no experience to guide us in handling this important problem. We do know that the problem involves great difficulties, because it is not easy to induce men to prepare themselves for a new occupation unless they feel reasonably sure of getting employment in it, and it is not possible, as a rule, to assure displaced men of jobs. We also know that the problem varies from locality to locality and from industry to industry. In some cases there may be an opportunity to transfer men into an industry where plants are large. In such instances, it may be best to provide the training in the plants which hire the men. But when men are to be transferred into small plants, such as garages or women's garment factories, training must be given by the community or by a number of co-operating small plants. Several of the most notable retraining experiments have been sponsored by trade unions and in many instances the co-operation of unions should be exceedingly helpful. In view of the fact that the problem is different in every situation, the best way to promote retraining is to give a central body such as the federal labor board an appropriation to subsidize retraining projects which it approves. A national body, such as the board, would be in a position to take the lead in initiating projects when and where they were needed and to support them as long as the need lasted. It would be able to apply in each place the experience gained in other places and to avoid making the same mistake too many times. It would be in a position to command the co-operation of individual employers, trade associations, trade unions, and the local communities. It would undoubtedly act more promptly, with better judgment, with richer experience, and with more vision than any other body.

What can be done to prevent technological improvements from producing unemployment by causing wages to become too high relative to the prices of capital goods? It is possible that the widespread adoption of the legal dismissal wage, by retarding the adoption of labor-saving devices, would reduce the displacement of labor sufficiently to counteract the too rapid rise in the price of labor relative to the prices of capital goods. But one cannot be certain of this. In the event that the number of jobs fails to increase as rapidly as the labor supply, what can be done?

An obvious suggestion is to reduce wages. But there is no machinery for doing this and it is difficult to see how such machinery could be constructed. Another alternative would be to stimulate the accumulation of capital. If the proportion in which it is most economical to combine capital and labor has changed from, say, six units of capital for each laborer to seven units of capital for each laborer, it is obvious that an increase of one-sixth in the amount of capital is needed in order to prevent unemployment. The more quickly this increase is achieved, the more quickly will unemployment be eliminated. Unfortunately our apparatus for regulating the rate of capital accumulation is even less adequate than our apparatus for controlling wages, and there is small prospect that we shall soon be able to control the annual additions to capital. Still another alternative would be to inflate the general price level slightly. As wages are not highly sensitive to price changes, a small rise in other prices could occur without substantially affecting wages. Thus the proper relationship between wages and the prices of capital goods might be restored. As yet we lack instruments upon which we can rely to inflate prices slightly but not too much; that is, without permitting the inflationary movement to get beyond control and go too far. Possibly within a decade or two we shall possess them. At any rate, the policy of slight inflation has more practical possibilities than either the policy of controlling wages or the policy of accelerating the accumulation of capital.¹⁵

But is there no prospect of more immediate relief when labor-saving devices prevent the number of jobs from keeping pace with the supply of labor? It is frequently suggested that unemployment be converted into leisure by reducing the hours of work. The trend of working hours has been downward for well over a century but most cuts in hours have been the result of bargaining. Unfortunately, when working hours are determined in this way, reductions are likely to occur most slowly at precisely the times and the places that labor-saving devices are producing most idleness. Undoubtedly we need the planned creation of leisure in exactly sufficient amounts to prevent technological unemployment, but reducing the hours of labor involves more problems than is ordinarily suspected.

Working time may be cut by reducing either the working days per week or the hours per day. Today the proposals most frequently discussed are the five-day week with an eight-hour day and a six-day week with a six-hour shift. It is usually assumed that a six-hour shift would mean two shifts a day. From the non-economic point of view, the five-

¹⁵ There are reasons why a slow inflation is undesirable as a steady policy. In fact, although slow deflation greatly accentuates the problem of unemployment, it is probably to be preferred on general economic grounds under most circumstances both to an absolutely stable price level and to a slowly rising price level. Rapid deflation is, of course, an entirely different matter.

day week with the eight-hour day is preferable to the six-hour shift six days a week, because a week-end of two days can be used more advantageously by most workmen than two hours of additional leisure each day. Furthermore, if the six-hour shift means the use of two or more shifts a day, interference with family life may result when one member of a family works on a morning shift and another member on an afternoon shift. From the economic point of view, however, the five-day week has the grave disadvantage that it is likely to decrease rather than increase the number of jobs and hence increase the volume of unemployment. It is generally assumed that the five-day week will be coupled with an increase in hourly wages sufficient to counteract the reduction in working time. Otherwise the shorter week would not be acceptable to the men. But the unemployment which the five-day week is intended to remedy arises because money wages have become too high relative to other prices, particularly the prices of capital goods. If hourly wages are raised to offset the reduction in working time, the disparity between wages and other prices will, for some time at least, be aggravated. Will not this largely, if not wholly, cancel the effect of shorter hours upon the number of jobs? Eventually, of course, the effect of higher wage rates may be translated into higher prices for commodities in general. In the meantime, however, the higher hourly rates will tend to keep down the number of jobs. Whether this effect more than counteracts the gain from the shorter work week depends upon the elasticity of the demand for labor. Since it is probable that the demand for labor is elastic, no one can be surprised if the five-day week with one shift of eight hours and a compensating increase in wage rates aggravates rather than diminishes the problem of unemployment.

Far more promising as a method of converting unemployment into leisure is the six-hour shift, provided that the six-hour shift means the use of two or more shifts each day. This method, it is true, might create a transfer problem of some magnitude in the labor market, because the substitution of two six-hour shifts for one eight-hour shift would enable the more efficient plants to capture a larger share of the business and would compel some of the less efficient plants to shut down. The total number of jobs, however, would probably be increased rather than decreased because the advance in hourly rates necessary to compensate for the reduction in working hours would in most cases be more than offset by the savings in overhead made possible by the use of two six-hour shifts each day. Suppose, for example, that the overhead and the direct labor cost of a plant operating forty-eight hours a week are precisely the same. The plant changes to two six-hour shifts a day and raises wages exactly enough to compensate each employee for the reduction in his hours. If output rises in precise proportion to the increase in

the hours, unit cost will fall by one-sixth. Of course, in industries where overhead is small, the saving from the use of two shifts might be insufficient to offset the higher wage rates. It seems plain, however, that if labor must be compensated for the reduction in hours, the only way to destroy unemployment by converting it into leisure is through a plan which permits industry simultaneously to achieve substantial savings in overhead.

But how could a movement to reduce hours be initiated and carried out? Who would determine when shorter hours were needed and who would persuade business enterprises to reduce them? Clearly there is little hope of reducing hours by law, for here again the government's authority over most branches of industry is divided among forty-eight state legislatures.¹⁶ Probably the body best able to induce competitors simultaneously to cut hours would be the federal labor board. Its close and constant contact with the problems of technological unemployment would give it intimate knowledge of when and where cuts in hours were needed.¹⁷ The board would probably find it wise not to attempt to effect a more or less general shortening of hours in all industries but rather to accelerate reductions in those industries where changes in methods or markets were producing a large displacement of men. These reductions would probably not entirely prevent the displacement of workers but they might be sufficient to adjust the total number of jobs in all industries to the available labor supply. Furthermore, they would occur, for the most part, where they would do the most good. The board's success in inducing industry to cut hours would depend upon conditions. Undoubtedly its success would be greater in industries where technological progress was enabling enterprises to achieve substantial economies than in industries which were being destroyed or reduced in size by progress in competing industries. And, of course, its success would depend partly upon the strength and the vitality of the labor movement. The moral influence of vigorous trade unions is great even in industries in which union membership is small.

For two centuries now, we have permitted the Juggernaut of industrial revolution to run wild. We have developed institutions which subsidize change on an enormous scale and which cause it to occur far more rapidly than in any previous age. And yet we have failed, for the most part, to

¹⁶ Do legislatures possess the constitutional authority to compel a reduction in the hours of male adult workers for the purpose of reducing unemployment? This question has never been decided by the courts. Some of the more reactionary courts might deny the authority. Nevertheless, the elimination of unemployment would appear to be a legitimate public purpose and there is reason to believe that the more enlightened courts would sustain reasonable legislation for its accomplishment.

¹⁷ The board would require for its guidance far more accurate statistical information than is now available concerning the number and kind of displaced men who had not been absorbed by industry.

recognize that change presents a major social problem; we have made almost no effort to keep down the cost of change or to prevent change from occurring at a wastefully rapid rate. We have done virtually nothing to assist men to adjust themselves to industrial changes. Almost without raising a little finger to prevent it, we have permitted the development of industry to wreck thousands of lives and to produce an enormous human scrap heap. Prominent organizations of employers have resisted all efforts to modernize the labor market as stubbornly and as bitterly as any trade union ever opposed the installation of labor-saving devices. After two centuries of industrial revolution is it not high time that we recognize that change is bound to occur too rapidly and to produce misery and degradation unless it is controlled and intelligently directed and unless men are assisted to adjust themselves to their new environment? Is it not high time that we recognize that change is now occurring on such a vast scale that we can no longer simply permit it to happen regardless of the consequences which it produces? Surely if we deliberately stimulate change, we should go out of our way to protect those who are injured by it. The suggestions which I have advanced are conservative and would fall far short of adequate protection. But they would be an immense improvement over doing nothing and they are probably sufficient for a first step. Long enough we have accepted the naïve and fatalistic philosophy that everything will be all right provided only we carefully refrain from attempting to make it all right. Let us recognize clearly that few forms of industrial waste bulk larger than the unnecessary costs of progress and that few economic problems are more important or more difficult than this problem of how to control change so that it will occur less wastefully and will inflict less misery.

DISCUSSION

EWAN CLAGUE.—The first point I should like to mention is Professor Hansen's theory of labor costs vs. capital costs. To quote: "Were it not for institutional frictions preventing the prices of the factors from shifting with every change in productivity, there would be no technological unemployment." The latter is due to the failure of the pricing system to adjust itself to changes in the relative productivities of capital and labor at the margin; this failure, according to Professor Hansen, causes labor to be overpriced in relation to capital and therefore creates unemployment. Still another way of saying it is that wages become too high.

I am not wholly in disagreement with this theory, but there is one fact which rather puzzles me. If labor is overpriced and unemployed, capital should be underpriced and in great demand. Then how does it happen that in practically every industry in the country we find that excessive plant capacity mentioned by Professor Jerome? Isn't it true that capital, too, is unemployed on a large scale?

I am not talking about the present depression, but about the prosperity of 1923-29. A few industries actually did operate at capacity for a few months at a time during this period—steel in the early part of 1929, copper and automobiles in 1928. But what about the great majority of industries which, even in our most feverish prosperity, never enjoyed capacity operation at any time? What about boots and shoes, leather tanning, cement, textiles, etc.? Making all due allowance for the shifting of industrial production which is constantly taking place (the growth of new industries and the decline of old), is it not true that nearly all the important industries in this country are overequipped? And is it not this unemployed capital which is responsible for the unemployed labor?

There may be an explanation for this. Perhaps there is a great demand for new capital. Technological change may be rendering existing capital equipment obsolete so fast that it never gets used to its full capacity. We might find the demand for certain new kinds of labor equally insistent—for example, in the hosiery industry in Philadelphia several years ago when wages reached a height of \$100 or more a week for especially skilled workers. The point I want to make is that technological changes may be so rapid and so far-reaching that they bring about a condition in which all factors of production may be simultaneously unemployed.

Does not this show that mere adjustment of the wages of labor would not meet the problem? Professor Hansen spoke of institutional factors preventing the prompt adjustment of wages to the marginal productivity of labor. I should like to call attention to equally important institutional factors of another sort—particularly the institution of long-time contracts at fixed prices, usually in the form of bonds or rent contracts. Increased technological efficiency exerts a downward pressure on the price of the product. But since these contracts guarantee a fixed return, they result in the appropriation of an ever larger proportion of the total product by the creditors of the business. Thus they might force violent readjustments in the other returns—say, the wages of labor—without the situation being fully remedied.

Thus I find myself in complete agreement with Professor Slichter in calling for monetary and credit arrangements of some kind which would bring about a steadily rising price level at a low rate, perhaps 1 per cent per year. I might mention another suggestion which has been made many times before. If labor, in the interest of full employment, must take a cut in wages commensurate with the decline in prices, then the bondholders might also be asked to take a cut—say, a reduction of 1 per cent in the interest rate on each bond. Thus both sets of returns might be repriced on a common basis, and the employment of both factors correspondingly improved.

I think the point finally comes down to this. Whatever may be the volume of technological unemployment ascribable to the changed marginal productivities of labor and capital, it will be small in comparison with the amount of technological unemployment of labor and the idle capital equipment which can be attributed to the influence of institutional factors affecting them both.

Professor Slichter raises the question of controlling the creation of new machines; he proposes further regulation of patents. I believe there may be something in the suggestion that the taxing power of the government would be of some use in this connection. Certain of our so-called nuisance taxes—those on tobacco, cigarettes, theater seats, even automobiles—tend to withdraw purchasing power from the consumer, and one of our basic difficulties is the creation of enough consumers. Might it not be possible to work out a method of taxing machinery and equipment which would tend to slow down their development?

I am in complete agreement with Professor Slichter on the dismissal wage. We do not need to justify these payments solely on the ground that the worker has certain rights in the job; we might equally well justify the dismissal wage as a method of regulating the investment of new capital. As to its efficacy, I might point out that in our study of the New Haven rubber workers laid off by the U. S. Rubber Company we found that the dismissal wage, added to whatever earnings the workers were able to make in the interval, was sufficient to carry the families at the old standard of living for nearly a year. This would be long enough to enable most workers to find a new steady job.

No commentary on Professor Slichter's paper would be adequate without some mention of his federal labor board. It is evident there is no existing machinery to take care of the problems of technological displacement. One of the functions of such a board would be to obtain from industry some reasonable action on the problems of displacement. But Professor Slichter is going to make the board purely advisory, leaving it to industry to accept or reject suggestions as it pleases. I think we all realize the difficulties and dangers of giving much power to such a board. Nevertheless, I should like to see in it a little more of the Wisconsin idea. You may remember that some weeks ago Governor LaFollette presented his unemployment insurance program to the Wisconsin manufacturers. He told them that if industry would by voluntary action adopt private unemployment insurance plans, all right; otherwise, a state law. There is a great deal to be said for that kind of voluntary action in matters of this sort.

Professor Slichter speaks of the "ability and fairness" of the board members commanding the respect of industry. I think he should have explained how he would propose to get such men appointed. There are many excellent men in the government service, even on boards and commissions, but some of us who have been repeatedly disillusioned about appointments in recent years cannot help being skeptical. And so very much would depend upon the choice of members of the board.

Professor Jerome has thoroughly and ably covered the problem of measurement. There are many details yet to be ironed out, but I find nothing with which to disagree in his presentation. There is one point which I think he might properly have touched upon: What is the usefulness of measuring productivity changes? Some critics have questioned the value of such work, and, while I do not agree with their conclusions, the question requires an answer. Do we need productivity measurements to enable us to take the steps toward control which Professor Slichter advises? Would economic theory be at all influenced by the computation of reasonably accurate and acceptable data on productivity changes? We need further exploration along this line.

R. E. MONTGOMERY.—These brief remarks must, in view of the practical circumstances of their preparation, be confined to Professor Slichter's paper alone, and cannot be more than passing comments on some of the aspects of his program or observations on matters of relative emphasis.

The major thesis—that change is subsidized under our present system to a dangerous extent, that the costs fall in large part upon members of the community other than those initiating the changes, that instruments for controlling the rate of change must be discovered and utilized, and that part of the cost must be put upon those benefiting from technological change—has been presented so clearly as to render elaborative comment superfluous. Disagreement with this general thesis would, I suppose, have to rest chiefly upon the assumption that until we abandon more completely than we have the precepts of *laissez faire*, interference with the rate of change, effected by legal dismissal wages or by other devices, would introduce complications and costs so important as to dictate as the better alternative a policy of letting technical changes work themselves out unhampered and the adoption of some form or other of social maintenance for those elements of the community upon whom the burden falls most heavily.

Mr. Slichter's paper is, I think, itself the answer to this dissenting thesis, especially the earlier sections where he discusses in some detail the likelihood that introduction of labor-saving devices will leave wage rates too high in relation to the price of capital goods and suggests necessary qualifications to the optimistic conclusion of the economists with respect to the long-run relationship between introduction of labor-saving devices and the number of jobs available.

The program sketched in this paper does not depend for its justification upon the assumption that technological changes are going to occur at a more rapid rate in the future than in the past; and it may therefore not be entirely relevant to suggest the desirability of further discussion of this assumption. Whether those changes, technical and other, which produce maladjustments

and necessitate rather complete cyclical readjustments are going to become "steadily more important" is of course a question that has been discussed in detail many times. There is still opportunity, however, for clarifying discussion and investigation.

The most valuable comment that can be made upon Mr. Slichter's discussion of the relationship between introduction of labor-saving devices and the number of jobs available is, it seems to me, a word as to the importance of making the kind of refinements he does upon the traditional reduction of cost and elasticity of demand which have lead economists to their optimistic conclusion that enough new jobs are created to reabsorb those men who are displaced. While it may be taken as almost axiomatic that each change creates a new situation with respect to the supply of and demand for labor, we can make little progress in getting at a question, such as that of the circumstances under which the six-hour day may be introduced without the compensating increase in wages having the effect of increasing rather than diminishing unemployment, unless we proceed in our theoretical analysis somewhat along the pathways his paper suggests.

From the viewpoint of one who agrees that "it is high time to recognize that change is bound to occur too rapidly and to produce misery and degradation unless it is controlled and intelligently directed" there is, it seems to me, little opportunity for quarrel with Professor Slichter's program for adjusting the labor supply to changes in the kind and location of jobs. The practical consideration in connection with federal encouragement to the setting up of dismissal wage reserve funds through the inducement of reduction in corporate income tax payments and in connection with getting into operation a federal labor board which could achieve the program outlined for it and at the same time "command the respect and confidence of business men" are, it is almost trite to say, full of enough difficulties to be conducive to mild pessimism rather than to optimism. Certainly, however, there is much opportunity for an exploration of the possibilities of the widespread adoption of the legal dismissal wage in retarding the adoption of labor saving devices and thus reducing the displacements of labor sufficiently to counteract the too rapid rise in the price of labor relative to the prices of capital goods.

BORIS STERN.—In the course of my recent studies on technological displacement of labor I was called upon time and again to determine what is really meant by technological change and particularly to define the scope and the extent of its influence. In the following two examples both of which are taken from my own field work I hope to convey to you the difficulties with which one is confronted in this comparatively new field of research and to emphasize the need for a generally accepted definition of the terminology and the scope of this type of study. My first example is from the amusement industry. The most revolutionary technological change in this industry in recent years was the installation of sound equipment in the motion picture theatres, which resulted in the immediate displacement of more than 50 per cent of the musicians formerly employed to accompany the silent pictures. Indirectly, however, the introduction of sound affected the entire field of amusements. Whether due to the novelty of sound pictures or to some other

cause, the majority of the legitimate and vaudeville theatres in the country found themselves without patronage and were compelled either to close shop or to revert to motion pictures, eliminating the artists, musicians, stage hands, and other help formerly employed in these theatres. Are these workers also to be classified among the technologically unemployed in the amusement industry?

The impact of the change from silent to sound pictures went further than that. The rapidly declining demand for musicians seriously affected the domain of teaching music, with the result that a very large proportion of music teachers found themselves without means for a livelihood, thus still further swelling the ranks of unemployed musicians. I could go on and continue to trace the effects of this single change in the motion picture theatres, even extending beyond the amusement field into several other industries only remotely related to this field. The question is, are we to make a complete investigation of our entire economic and social order each time one undertakes to study the effects of some technological change in a single industry.

In my second example I was confronted with a different set of circumstances. The industry in question is comparatively young, but has grown very rapidly in the last decade or so. The Bureau of Labor Statistics productivity index for this industry shows a large increase in the labor productivity which has been accomplished in the brief span of a few years. Upon visiting several major plants I was much surprised to discover that the increase in the productivity has not been accomplished by the usual means of what are generally known as labor saving devices or new machinery. In fact, the industry still employs a very large proportion of skilled workers on a piece work basis and can still be classified as belonging to the semiautomatic stage, with a decided predominance of hand work. Further inquiry as to the causes of the increased productivity of labor in one of the largest plants in the country brought out the following major factors: standardization of the product; a change in the cost accounting system which resulted in an improved coordination of the numerous semi-independent factory departments engaged in the preparation of the various parts which make up the final product; a change in the labor policy of the plant which resulted in a reduction of the labor turnover from 200 per cent in 1920 to less than 40 per cent in 1929 and slightly over 10 per cent in 1930. It was the belief of the general manager that the reduction in the labor turnover of the plant was more responsible than any other single factor for the large increase of its labor productivity. Are these unquestionably real causes of labor displacement to be classified as technological changes, or are we to devise another set of terms to differentiate them from changes in methods of production and in machinery?

Confronted with these and similar complications in my field work I was compelled to adopt a set of rules which I venture to present here as a starting point towards a general definition of the term "technological change" and towards a reasonable limitation of the scope of influences attributed to this factor. I was compelled to limit the effects of technological change strictly to the individual industry in which this change took place. Within the industry and particularly within the walls of a single plant, I was compelled

to classify as technological change any change, either in the nature of the product, in the method of production, in the type of labor or in the equipment or machinery used which resulted in a higher productivity, therefore displacing labor. This in accordance with the actual conditions in the plants where seldom, if ever, is it possible to segregate any one factor that could be singled out as "the cause" of the increased productivity of labor in the plant.

With technological change thus defined and limited, the problem of its measurement does not present any particular difficulty. Its natural yardstick is the quantity output per unit of labor time, the unit of output varying in the different industries. This seems to be the underlying plan of the series of productivity studies which the Bureau of Labor Statistics has been carrying on for several years. I should extend these studies over a larger number of industries than heretofore practised by the Bureau. Besides I should also expand our industrial census to include such additional information as will be necessary to enable us to build up a series of continuous industrial indices of labor productivity, in the principal industries. Their primary object should be to focus our attention on the particular industries which show a rapidly rising index, thus inviting a more intensive survey of the industry in question. Finally, I should inaugurate a series of larger industrial surveys covering the several industries affiliated in any one field, such as fuel, transportation, amusements, etc., to determine the effects of technological changes on the entire group. If labor is displaced in the coal industry, either because of labor saving devices or because of a decreased demand for coal, it is indeed pertinent to know to what extent the labor released in the coal pits can find employment in the oil industry or in the production and distribution of gas and electricity. Similarly, if the railroads and street cars are cutting down their labor we should know at least what opportunities of employment there exist in the newer branches of transportation, such as bus lines, taxicabs, aeroplanes, etc. In the course of these larger surveys it will indeed be desirable to incorporate sample follow-up studies of what actually happens to the groups of workers displaced because of technological or other changes in the industry.

With this triple attack on the question of technological change (that is, building up with the help of the census bureau a series of continuous industrial indices, continuing and extending the productivity studies of the Bureau of Labor Statistics, and inaugurating a series of industrial surveys to cover groups of affiliated industries), we shall indeed be in a much stronger position than heretofore to cope with the economic and social problems which are the inevitable result of this dynamic force in our industrial structure.

I am glad to note that my outline differs only slightly from the plan presented by Professor Jerome. It is less ambitious and for that reason perhaps easier to fulfill. I certainly do hope that this is the type of study which Dr. Slichter intends that his proposed federal labor board should carry out.

ALBION G. TAYLOR.—A proposal to reduce the subsidy received by those who initiate technological change arises from an old controversy among economists. The necessity of governmental control to check the unhappy effect of too rapid change upon workers was pointed out by John Stuart Mill in the

middle of the nineteenth century. Whenever industrial improvement proceeds at such a pace as to impair materially the income of labor, legislation may justly reapportion the burden of cost incurred. As newly discovered power appears, it must be harnessed and utilized for man's common good. In the absence of such control the penalties are serious. In recognition of this principle, mechanized warfare today becomes the object of international control, national resources slowly fall under the projective-minded ownership of the state, and the protection of the wage earners against industrial change enlists our co-operative effort.

Professor Slichter suggests that this protection be provided by reducing subsidized change. He would require those who initiate changes to bear a larger part of their costs, contending that the subsidy is now being borne largely by "those whose property or occupations are rendered obsolete."

The plan for a readjustment of cost burdens calls for certain additional safeguards on behalf of those who previously provided the subsidy, or they would continue to supply it through other channels. A dismissal wage, while acting primarily as an incentive to reduce lay-offs, would also shift to concerns which introduce labor-saving devices more of the costs which now fall upon the worker. Any such reapportionment of costs would be met by an attempt to return the burden to the shoulders of wage earners in some manner. A government bearing a part of the dismissal wage through the decreased return from income tax might seek other revenue through applying a sales tax, a tariff, or other levy which would decrease real wages. On the side of the entrepreneurs, who assume a portion of the new burden of the dismissal wage, attempts might be made to shift that burden into the price field and thus place it again in part upon the worker.

The moral effect of a dismissal wage upon the worker would probably be more wholesome if he contributed somewhat toward it, but both he and his employer should be fully conscious of that contribution. This suggestion is not made because of any hope of an exact allocation of costs to the employer, the worker, and the state, so as to provide an incidence which is just. The psychological effect upon the worker would alone justify a plan which makes him co-operate with his employer in providing against the day of unemployment. A happy medium must be found between social responsibility for victims of technological change and the individual's concern for the security of himself and his dependents.

Professor Slichter notes that the dismissal wage is not likely to be widely adopted unless it is made compulsory. Legislation providing for compulsion is not likely to be forthcoming unless the plan is based upon co-operative financial responsibility. Some may contend that any contribution made by the worker defeats the attempt to prevent subsidized change which occurs at an uneconomically rapid rate. Conversely it will be argued that since technological progress results in an advance in real wages even when prices are rising, and a greatly augmented increase in real wages when the general price level is falling, the worker should bear some of the cost incident to technological change.

The plan for preventing the displacement of men through a dismissal wage

is unique in that it provides what appears to be a strong incentive. It motivates the retention of workers and makes them versatile through retraining. Another line of attack might serve quite as effectively in preventing technological unemployment if it were also accompanied with so forceful an incentive. If the profits of innovators possessing legal monopoly rights were reduced, prices conforming more nearly to lowered costs, consumers' purchasing power would be enlarged and the chain of forces which build for employment would be set in motion. This demands control which has been alien to the spirit of American institutions. Control of prices to insure some relationship with costs awaits an incentive which will insure proper legislation and the administrative co-operation necessary to its success.

The creation of a federal labor board as suggested, adequately equipped and financed, might command co-operation from industry. The history of other federal boards, possessing only power to investigate and recommend, is not encouraging. The scope of service rendered by such a labor board falls short of meeting the problem of present-day industrial maladjustment. Technological progress should go on unhampered, but with a fair apportionment of costs and incomes. Our industrial evolution continually leads toward a much larger use of the machine, and toward men of superior endowment and training who need to think and invent. This evolutionary movement should be guided by a force which attempts to co-ordinate better production and distribution. In the absence of such control a practical dictatorship may be thrust upon us. The times demand a system of economic organization and control which is embodied in the new principle of economic planning.

SESSION ON ECONOMIC ORGANIZATION AND THE CONTROL OF INDUSTRY

THE STABILIZATION OF BUSINESS AND EMPLOYMENT

By HENRY I. HARRIMAN

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The United States of America, in common with the rest of the economic world, is passing through a cyclical depression of great magnitude. Like all previous major depressions, this period is accompanied by widespread unemployment, a marked reduction in earning power, a diminution in sales, and, in general, economic disarrangement and distress.

In a time of great economic upheaval, it is natural to emphasize its gloomiest aspects and to believe that no cycle of equal severity has ever before been experienced by our people. A study of our economic history, however, reveals the fallacy of this assumption.

The great depressions beginning in 1873 and 1893 undoubtedly entailed greater relative loss and suffering. To recall some of the phases of the depression of the seventies, with its prolonged and bitter strikes, the stoppage of railroad transportation, drastic reductions in wages, the bitter antagonism between employer and employee, and the necessity for calling out federal and state troops in many cities, should convince us that we have advanced far in our social relations and general welfare. A comparison between conditions during the panic of 1893 and our present situation would reveal an equally striking contrast.

The most significant difference between this depression and previous ones is the better spirit which now exists between employer and employee. Today we find not a few but thousands of firms adopting work programs to rotate the available jobs among their workers. Instead of reducing the number of their employees to a minimum and retaining a few while others are dismissed, employers today are dividing among the largest possible number of their employees the work which is available. Our people have come to recognize their obligation to mitigate suffering and distress through unemployment, and they appreciate that every man and woman should have an opportunity to work at fair wages for reasonable hours and with every possible assurance of continuity of employment.

Encouraging as these considerations may be, they do not minimize the seriousness of the present situation, and I approach with much hesitation the task of discussing the stabilization of business and employment. I do, however, approach it with a complete consciousness of the duty which business owes to the community to help in bringing about normal and stable conditions and a desire to suggesting remedies which will, in

part, obviate the severity of the present depression. The present economic system is, indeed, on trial.

I feel that the task involves two considerations: first, the causes which have contributed to the intensity of the present depression and, second, the long-time remedies which may be suggested to prevent its recurrence.

Causes of Depression. There have been twenty-two periods of business depression in the last seventy-five years. Of these, eleven have been of comparatively minor intensity and length, eight have been more severe, and three have been extreme and prolonged.

Business produces because of its desire for profit. Possibilities of greater profit induce speculation and overproduction. These, in turn, bring about a surplus of goods, a corresponding lowering of prices, and finally the disruption of business and unemployment, with resultant underconsumption. The accumulated surplus of the previous period of expansion is exhausted; as a result, production is resumed and there is a return of prosperity and employment; and thus the upward and downward swings are continued. While we cannot expect with our present knowledge and experience to prevent recurring depressions, let us hope that the depths of the valleys of future depressions may be reduced by avoiding preceding periods of overexpansion and undue speculative activity.

Thus far economic science has not completely isolated the factors which determine the severity and length of depressions. In general, it is recognized that periods of unusual and speculative expansion are followed by periods of marked economic depression. Great wars undoubtedly cause the greatest expansion of human effort and cause the most complete disarrangement of the normal economic life. A study of statistics discloses that all of the really great and prolonged wars of modern times have been followed by periods of speculative readjustment, which in turn have been followed by periods of most severe depression. Colonel Ayres has pointed out that the two great wars in which the United States has been involved—the Civil War and the World War—have both been followed, at a period of about two years, by a sharp but rather short depression, and after a period of ten years by a most severe and prolonged depression. Without attempting to lay down any rule of periodicity, it is clear that great wars are always followed by great periods of speculation and expansion and recurrent periods of severe depression. But wars are not the only cause of depressions. The period of excessive railroad expansion of the seventies and eighties was followed by the depression of the nineties. Great catastrophies are also followed by depressions, and without attempting to say that action and reaction are equal in economics as in physics, it may, in general, be said that periods of speculative activities, whatever their cause, are followed by periods of depres-

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sion, and that if we would minimize future depressions we must minimize prior periods of speculation and expansion. Speculation in its most reprehensible form has always accompanied periods of unusual prosperity. It has manifested itself by inflation of values in lands, securities, and commodities, by overexpansion of productive capacity, and by overextension of credit. This type of speculation is harmful both in its material and its moral effect upon the individual. Values of credit resources, the buying power of the people, and business confidence would improve if undesirable speculative activity could be banished or diminished and business continued from year to year on a reasonably steady basis.

Technological Unemployment. Many observers attribute our widespread unemployment to the rapid progress which industry and agriculture have made in the use of labor-saving machinery. This unemployment is termed "technological." I cannot, however, accept this theory. Advances in the arts have reduced the price of commodities and have increased the sum total of human desires and the ability to satisfy them. It is an indisputable fact that despite the displacement of working men and women by machinery, the proportion of our population gainfully employed in our factories and other activities was as high in 1929 as in 1899. These are years for which the census of manufactures is available. In 1899 the average number of wage earners in our manufacturing establishments was 4,700,000, and they constituted 6 per cent of our entire population; in 1929 the number of wage earners had risen to 8,700,000, and constituted 7 per cent of our population. Likewise, in 1900, 29,000,000 people were employed in gainful occupations, or 38 per cent of our population; in 1930 the number gainfully employed was 49,000,000, or substantially 40 per cent. Such figures have particular significance because during the thirty years in question there was a large relative decrease in our farm population.

Furthermore, while the number of men and women employed in gainful occupations has increased in substantially the same ratio as the population, it is also an arresting fact that during the same period the weekly hours of work in manufacturing establishments were substantially shortened—certainly by as much as one-eighth and probably by as much as one-sixth. If hours of labor have been excessive, a reduction in hours may often be accompanied by an actual increase in productive capacity. It is doubtful, however, whether the recent reduction in the hours of work has resulted in increased output, and this shortening of working hours is one of the factors which has enabled our factories to maintain a constant or increasing ratio of employment to population.

During the last thirty years there has been a great increase both in productive capacity and in consuming ability. This has been accompanied

by a shortening of the hours of labor and a very substantial increase in real wages.

Professor Douglas of the University of Chicago after a careful study of the real wages of fifteen millions of our population estimates that real wages have advanced during the last thirty years by as much as 30 per cent. Whether these figures are actually correct is not to the point. It is significant, however, that the period of expanding production through the use of improved machinery has been accompanied by a shortening of the hours of labor, by a better standard of living and an increase in real wages, and by the maintenance of an equal quota of our population in gainful occupations.

While I cannot accept the theory that "technological" improvements are the primary cause of unemployment, no one will doubt that such improvements may be a serious factor in causing temporary unemployment, particularly if this advance has been extremely rapid. When men are displaced by machines, they should be trained and assigned to other work, wherever possible.

Remedies for Depression. Any consideration of remedies to lessen the heights and depths of business cycles must take into account the changed economic conditions of our population in the last fifty years. During the early decades of the last century our population was largely agricultural, and if at times there was a large overproduction of any article with a consequent lowering of its price, the farmer still had his home and raised the major portion of his sustenance. Thus the balancing of supply and demand under the workings of the natural laws, while accompanied by hardship, was not in general accompanied by actual starvation and want. Under our present highly specialized form of production the balancing of supply and demand by natural laws entails discharge of men from industry, loss of wages, and consequent inability to purchase food, fuel, and shelter. Thus the workings of the natural economic laws entail much greater hardship in our complicated civilization than in the relatively simple life of our early history.

We must likewise recognize that our country is fast reaching a period of stabilized population. During the last century the population of the United States grew from three million to one hundred million souls. Now the rate of increase has slackened and the careful studies of qualified experts indicate that the population of this country will probably never exceed one hundred sixty millions—that figure being reached by the end of the present century, followed in the estimation of some by an actual decrease.

The industrial philosophy of the nineteenth century looked to an ever-increasing population to keep a satisfactory balance between supply and demand. It was the theory of both the economists and industrialists

of that century that while overproduction might exist for a time, the ever-increasing growth of population would soon cause demand to equal supply.

Innumerable suggestions have been made to cure the evils of depression. In one form or another, many of these suggestions contemplate the adoption of devices to establish a better balance between production and consumption, and in principle I am in accord with this point of view. Only through a proper co-ordination of production and consumption can a sane, orderly, and progressive economic life be developed. A freedom of action which might have been justified in the relatively simple life of the last century cannot be tolerated today, because the unwise action of one individual may adversely affect the lives of thousands and we have of necessity left the period of extreme individualism and are now living in a period of national economy which must be recognized as the controlling factor.

Under our form of industry a very large portion of the national income is distributed through the instrumentality of industry and business, the distribution being in the form of wages, salaries, rents, interest, and dividends. If, then, industry is to pay high wages to people working a reasonable number of hours and is to set up reserves in time of prosperity for unemployment benefits and to provide means to care for accidents, sickness, and old age, as I believe should be the case, business, itself, must be on a sound and profitable basis. Cut-throat competition must cease, dividends and interest must be earned and paid, and to do this production must be balanced with consumption.

Producers in general would prefer to gauge their output to the consuming capacity of the country and divide the volume of such production among the different units of industry on an equitable basis, rather than to continue the present harsh and unremunerative competitive system, but this they cannot attempt today because of the ever-present risk of incurring penalties under antitrust laws which, suitable as they may have been for economic conditions of an earlier day, are not in consonance with the present-day needs of industry.

It is not suggested that the present antitrust laws be repealed, but it is suggested that they be amended to provide that (a) business concerns desiring to enter into contracts for the purpose of equalizing production to consumption and so carrying on business on a sound basis, may make such contracts, but must file them with some governmental authority having supervision over the same, such contracts to continue in force until such governing body finds on complaint or on its own initiative that such contracts are not in the public interest, in which event such agreements shall be abrogated, and (b) business concerns that desire to combine may find out from some governmental authority before the combina-

tion is made whether or not such combination is prohibited by our anti-trust laws.

I do not suggest the details of legislation, but I do feel that such agreements should be made only with the fullest publicity and under a common cost accounting system for the companies involved. Neither do I suggest that all companies in a common trade or industry be compelled to agree with each other as to the distribution of output. That may come later, but compulsion should be delayed until it has been seen that voluntary action for the common interest cannot be obtained.

The committee of the United States Chamber of Commerce appointed to consider business and employment stabilization came to the conclusion, after most careful study and after conferences with leading business men in many parts of the country, that a national economic council, if properly developed and constituted, would be of great value to this country. With this conclusion I heartily agree. This council should, in my opinion, be an advisory council rather than an executive board.

The present depression gives compelling evidence that our country is confronted with economic problems of the gravest importance and as yet there is no united or settled opinion on many fundamental questions. An advisory council, in dealing with them, could perform a great national service provided that it was so constituted that it would command respect by reason of the ability, integrity, impartiality, and independence of its members and provided further that it be so financed and staffed that its recommendations could be based upon and supported by an adequate analysis of conditions.

A few illustrations will serve to indicate the range and character of the problems with which such a council might deal:

- (1) Assuming a reasonable and proper standard of living for the 120,000,000 people constituting our population, how many of our workers are required to produce, transport, and sell the major necessities of such a standard of living, to wit, shelter, fuel, and clothing? We have many figures available on actual production and cost but few based upon an adequate standard of living for our entire population.
- (2) The tendency of productive capacity to outrun ability to buy. How can our enormous ability to produce wealth be controlled and directed so as to be of the most use to our people instead of being a menace to prosperity?
- (3) The levels of wages. How should they be determined and maintained so as to contribute to prosperity?
- (4) Foreign trade, both export and import. The extent to which it should be encouraged and the methods by which international debits and credits resulting from such trade and service can best be dealt with.
- (5) The agricultural policy of free lands to settlers, of irrigation and drainage projects and of other means by which the area of our culti-

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vated land is increased. Are these policies wise or should they be reversed?

These are but suggestions of the fundamental problems which should be considered by such an economic council. In my judgment, its function should be not to consider the problems of the steel trade or the electrical trade or any other particular industry but to study the more fundamental problems which affect all industry and which must be solved if economic prosperity is to continue.

In order to speak with the authority desired, the members of the council must not only be men of the highest ability and character but they must be representative of the country as a whole and not of any particular constituency and they must be so appointed as to be entirely beyond suspicion of control by any group and free from all political interference. The council, in my judgment, should be small, preferably of five members serving either for life or for long terms of ten or fifteen years.

There has been much discussion as to the advisability of creating strong trade organizations for co-operative and beneficial action within any trade or industry. In my opinion, such trade organizations can be of the greatest possible value, provided our antitrust laws are so modified as to enable them to act in an efficient manner. I further believe it would be wise to have the presidents of the major trade organizations of the country act as an advisory board to the national economic council, thus tying together general research with research for the benefit of any particular trade or industry.

There has been much discussion as to whether such an economic council should be financed and appointed by business itself or whether it should be created as a department of the government with its members appointed by the president and its expenses defrayed from the national treasury. The council will only be of value if it be free and untrammelled and capable of rendering judgment irrespective of the influence of any particular trade or of any class of our population or of any political party or group. I, therefore, feel that the economic council should be appointed and supported by business, though it should co-operate with government departments and with trade organizations and encourage the latter to form strong economic councils of their own. It has been suggested that the Chamber of Commerce of the United States name fifty leading representatives of industry, the professions, labor, and agriculture to act as an elective board to choose such a council. It has likewise been suggested that the national economic council be incorporated by a special federal charter, its initial directorate being the president of the United States and a group of leaders in business, the professions, labor, and agriculture, this board choosing the ultimate council, with possibly a veto power on the part of the president over any appointment. Either plan would,

in my judgment, provide the country with an able, independent, and fearless economic board.

If such a council is to be successful, it must also be amply financed, its budget being not less than one million dollars a year. When we know that one corporation is spending over a million dollars a year in physical research, can we doubt that business will fail properly to finance a strong economic council, whose research will be of the greatest value to the entire country?

This country cannot be permanently prosperous until it has a reasonably successful agricultural population. Ten millions of workers and thirty millions of people are dependent upon the farm for their support. A large portion, perhaps the majority, of this farming population is receiving most meager returns for long and arduous labor. It is also most important that the purchasing power of this farming population be restored to normal, for obviously our industries cannot be prosperous while a fourth of our population is almost without the ability to buy.

I realize fully the temerity of anyone who even suggests remedies for the ills of agriculture, but at the risk of being called foolhardy, I am going to make a few observations:

First: The Agricultural Marketing Act under which the Farm Board now operates provides, among other powers, that the Board may attempt to stabilize prices of farm crops by governmental purchases direct or through co-operatives acting for the government. For such purpose a revolving fund of \$500,000,000 was created. This portion of the agricultural act is, in my judgment, thoroughly unsound, as is well demonstrated by the prices of cotton and wheat after the purchase and holding of vast quantities of these products by the Farm Board. As might have been expected the result has been to stimulate production and to create vast surpluses that overhang and threaten the market. Can it be doubted that the prices of cotton and wheat would never have reached the low levels of 1931 if governmental interference in the normal activities of trade in those articles had not taken place? Brazil tried the same experiment with coffee, England with rubber, Japan with silk, and Cuba with sugar, and in all cases the ultimate result has been a precipitous lowering of prices by the creation of huge surpluses of the respective crops. There are other features of the Agricultural Marketing Act that are valuable, but the sooner the right to attempt the stabilization of prices by governmental purchasing of crops is abrogated, the better it will be for the farmer and for the country.

Second: From our earliest history, the policy of the country has been to expand the acreage under cultivation. Government land has been thrown open to settlers substantially without cost, irrigation reservoirs have been built, drainage works constructed, and every endeavor made to

place the largest number of people upon the land with the least possible cost. Undoubtedly this policy was wise in the early history of the country, but its present continuance jeopardizes an already serious farming situation. We are suffering from an overproduction of agricultural products and are economically starving because of a wealth of food. We have too much marginal land in cultivation. We need less and better managed land rather than more land under the plough. I would, therefore, suggest as the second point in an agricultural program a plan of anti-expansion of land areas and a provision that as farms are foreclosed for non-payment of taxes and come into possession of federal, state, or municipal governments, they be converted into state forests.

Third: Repeated efforts have been made to enact legislation for the creation of an "equalization fee" to be levied on certain specified crops, such as wheat or cotton, or as an alternative to provide for "export debentures." Both of these, in the last analysis, provide for export bounties and would undoubtedly be instantly met by added antidumping duties by nations importing such agricultural items. They would, therefore, be non-effective. I do, however, feel that the suggestion for domestic allotment certificates on some of our leading export crops has much to be said in its favor, and that if the government is to interfere in any way with the normal action of supply and demand in agricultural products, it can best be done as suggested by the proponents of domestic allotments. Certainly this plan would not interfere with normal activities of business more than does the tariff or other similar legislation. If the farmers are to receive a fair return for their efforts, equalization of the supply and demand of crops must be attained and the farmer must be encouraged to diversify his crop and to produce on his own land as much of his own sustenance as possible.

I approach with even more hesitation the subject of credit and banking and yet two facts are perfectly patent; first, that in times of great prosperity, credit for speculative purposes is far too easily and too readily obtained; and, second, that in times of depression the fear that bank deposits may not be safe, leads to cash withdrawals and hoardings and resulting bank failures.

The guaranteeing of national bank deposits has been suggested. It is very properly opposed on the grounds that it will encourage unsound banking. Branch banking has also been suggested and I am inclined to believe that within reasonable limits, it would be wise and far better than the chain banking that has sprung up in many sections of the country, and which is in effect branch banking without branch banking responsibility.

Mr. Traylor of the First National Bank of Chicago has suggested that brokers' loans be not made to customers purchasing less than one

hundred shares of stock but that such small customers look to their banks for loans. It is an interesting suggestion. It has also been suggested that there be much greater publicity concerning short selling. Short selling of stocks and commodities undoubtedly has a proper place in the economic world, but there can be little doubt that grave abuses have crept in, which must be corrected.

The real basis of sound banking is sound management of banks. There has seldom been a serious bank failure that was not long foreseen by the banking fraternity and yet the fraternity was unable to interfere with the management of such banks or with policies which were bound to lead to trouble. I raise the query whether the controller of the currency or the officials of the Federal Reserve Board should have authority to interfere with management when there is evidence that existing management is unsound. Again it is suggested that the basis of the Federal Reserve Act be somewhat broadened and that other securities than those now legal be added to the list which can be used for rediscount purposes. I do not attempt to pass upon this difficult and complicated question except to say that in so far as the list can be broadened with entire safety, it would probably be wise in times of financial emergency.

Finally, it has been suggested that a central mortgage bank be created to furnish mortgage money for home builders and possibly to release some of the frozen real estate assets of banks. It would seem to me far better for the federal government to stimulate business by organizing a central mortgage bank than to raise by taxation huge sums for the construction of roads and public buildings which add to national taxes without hope of possible financial return.

The growth of the automobile industry gave the great impetus to business from the close of the World War to the beginning of the present depression in 1929. I believe that home building and home improvement, with all that it implies, will give the push to business in the next decade and that suggestions for the stimulating of home building or home improvement should be given most careful consideration.

Earlier in this paper I have referred to the gradual shortening of the hours of labor and the steady increase in real wages over a period of years. It is my belief that this trend toward shorter working hours will continue in the future and properly so. Our economic and agricultural organisms, if properly co-ordinated, can undoubtedly provide the basis for a permanently high standard of living for our entire population and at the same time permit a reasonable curtailment in working hours, but I believe that such a curtailment must come gradually, being more marked in some lines of industry and at some periods than at others. This is probably a period when a reasonable shortening of the hours of labor might well be considered in many lines of industry in order that such work as is

available may be divided as equitably as possible among our working population. I would sound a warning, however, that any extremely radical or abrupt change in the hours of labor may bring about great economic harm, and that a shortening of the hours of labor at this time without a corresponding readjustment in wages will place a greater burden upon industry than it can stand. A shortening of the hours of labor in times of prosperity has often been brought about without curtailment of wages; but when occurring in times of depression it has usually been accompanied by some wage reductions. In the long run, however, despite the shortening of the hours of labor there has come a gradual increase in real wages, and a substantial betterment in the standard of living.

Studies of economic cycles demonstrate that all important wars of modern history have engendered periods of great economic activity followed by years of disastrous business depression. Another great war would undoubtedly be even more terrible and destructive than that which ended thirteen years ago, and modern civilization itself would be jeopardized by another calamity of such magnitude. I, therefore, urge that every possible step be taken towards a progressive world disarmament and that all forces leading to international amity and good will be carefully cultivated. At the disarmament conference soon to be held in Europe, I confidently hope that the United States will take a leading part in helping to achieve the purpose for which it is called.

Sickness, Accident, Old Age, and Unemployment Insurance. Throughout the world we find ever-increasing signs of economic and political unrest. With the largest crop of wheat and other grains this country has ever enjoyed, we find famine stalking in the land. Wheat is being fed to cattle in Kansas and bread lines are forming in nearby cities. With a production machine capable of producing a high standard of living for every man, woman, and child in this country, we find many millions of men out of employment and, in many cases, in actual want. This clearly signifies that while we have developed a marvelously productive civilization, we have failed in our adjustment of this civilization to the daily needs of its people. It is this maladjustment, this combination of surplus and poverty, of capacity and want, that is causing thousands of men in this and every other civilized nation to turn to socialism and to rely more and more upon the state to correct the ills of humanity. We have developed a marvelous economic machine but we have not adjusted it to modern life; hence one of the great problems which our present form of society must solve, if it is to endure, is to see to it that every man and woman who desires work is furnished work at fair wages with assurance of continuity of employment and with the further knowledge that when old age, sickness, or accident comes he or she will not be thrown on the none too tender mercies of charity.

We have learned in business to set aside definite reserves to tide corporations over periods of depression; we must also learn to set aside reserves to carry the worker through times of adversity. First we must put business on a sound economic basis with balanced production and consumption and with the ability to earn a fair return on the investment, and then we must place upon business the responsibility of setting aside such reserves as are necessary to care for unemployment, old age, sickness, and accidents. Many of our great corporations are thinking along this line but such action must be general and this result can probably best be brought about through effective trade organizations.

It is indeed ridiculous to speak of unemployment as a necessary condition of human society, or want in case of sickness, accident, or old age as unpreventable. We have learned through research to conquer many of the physical problems of the universe. Now through the medium of economic research, we must learn to prevent want and suffering.

Summary. In conclusion, may I briefly summarize this paper. Business cycles are the unavoidable results of human nature. Depressions in moderation undoubtedly serve a useful purpose. They lead to economy, to thrift, and to the prevention of waste; but carried to the extreme, they become disasters of the first magnitude. Every effort should, therefore, be made to prevent the intensity of great depressions such as occurred in 1873, 1893, and in 1929. Factors which will aid are the revision of our antitrust laws now obsolete and outworn, the creation of a national economic council, the balancing of production and consumption in agriculture, the correction of banking evils which have been shown to exist, the gradual shortening of the hours of labor with the advent of increased productive capacity, the betterment of international relations, and the prevention of war. Having put business on a reasonably profitable basis, we must place upon business the responsibility for setting up reserves to tide over periods of unemployment and to assure men against economic want and suffering because of sickness, accident, or old age.

In the preparation of this paper, I have had the very great advantage of the carefully prepared report of the committee of the Chamber of Commerce of the United States on continuity of business and employment. It was my privilege to be chairman of that committee and thus to be associated with many of the ablest and clearest business thinkers in the United States, and I have thought it proper to borrow broadly from that report. At the same time there is much in this paper which the committee of the Chamber did not pass upon, and I would not attribute to the committee any statement that is not contained in its report.

THE PRINCIPLE OF PLANNING AND THE INSTITUTION OF LAISSEZ FAIRE

By R. G. TUGWELL
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There can be no secure peace in the world so long as its peoples are divided among absolute sovereignties. The divergencies of purpose among them will always cause irritations which sometimes must fail to stop short of the ultimate compromise of war. Sovereign nationalities function in a wider field than industries do; there is, for all that, a useful analogy between them. For industry is also organized in independent units which possess many of the attributes of nations. They have a purpose which they pursue with zeal and foresight; they may pursue it in all essentials, and provided they can reach agreement quietly among themselves, with no governance save of their own making. These purposes, being exclusive and single minded, and being carried out at the expense of competitors, frequently involve recourse to ultimate measures. These begin in the subtle fashions of diplomacy but often end in appeals to force.¹ All this is of the essence of laissez faire.

War in industry is just as ruinous as war among nations; and equally strenuous measures are taken to prevent it. The difficulty in the one case is precisely the difficulty in the other; so long as nations and industries are organized for conflict, wars will follow, and no elaboration of machinery for compromise will be altogether successful. There are vast, well-meaning endeavors being made in both fields which must necessarily be wasted. The disasters of recent years have caused us to ask again how the ancient paradox of business—conflict to produce order—can be resolved; the interest of the liberals among us in the institutions of the new Russia of the Soviets, spreading gradually among puzzled business men, has created wide popular interest in "planning" as a possible refuge from persistent insecurity; by many people it is now regarded as a kind of economic Geneva where all sorts of compromises may be had and where peace and prosperity may be insured.²

¹ We have a word in the United States which we apply somewhat indiscriminately to certain money-getting activities. We call them "rackets." The term implies quick, easy, or questionable profits, something unethical by ordinary standards, perhaps not always outside the law, but not very far within it. The racketeer has come to mean one who makes money questionably and unfairly by appeals to violence to enforce his will. It is, however, not infrequently difficult to discriminate between what is a "racket" and what is simply "business." There is a wide, shadowed area in which what is legal and what is governed by violence are not at all clear. And, in fact, the processes of the law are sometimes forms of pressure difficult to dissociate from violence, particularly when official corruption is involved. There is some business which is clearly not of the racket sort and some which clearly is. But all too often the origin and aims of more respectable businesses are illuminated by appeals to pressures, to the corruption of officials, even to violence.

² Cf. J. H. Rogers' comment on the price system and the Russian alternative in *America Weighs Her Gold*, 174 ff.

It is my belief that practically all of this represents an unconsidered adherence to a slogan, or perhaps a withdrawal from the hard lessons of depression years, and that it remains unrelated to a vast background of revision and reorganization among our institutions which would condition its functioning. Most of those who say so easily that this is our way out do not, I am convinced, understand that fundamental changes of attitude, new disciplines, revised legal structures, unaccustomed limitations on activity, are all necessary if we are to plan. This amounts, in fact, to the abandonment, finally, of *laissez faire*. It amounts, practically, to the abolition of "business."

This is what planning calls for. In spite of its drastic requirements it may be wanted by many people; most of us are not, however, entitled to the contemporary familiarity with which we toss about loaded phrases whose content is altogether unexplored. It is one thing to advocate a social change which is understood and wanted; it is quite another to consent to a movement whose implications are unexplored. These implications may change early consent to later and bitter opposition. This seems nearly certain to happen; the respectful assent which is commanded by the general proposals of the present is not to be counted on when action is required on more particular policies. For these will show quite clearly what sacrifices are required. Those who talk most about this sort of change are not contemplating sacrifice; they are expecting gains. But it would certainly be one of the characteristics of any planned economy that the few who fare so well as things are now, would be required to give up nearly all the exclusive perquisites they have come to consider theirs of right, and that these should be in some sense socialized. In a romantic, risky, adventurous economy the business of managing industry can be treated as a game; the spoils can be thought of as belonging to the victor as spoils have always belonged to victors. But a mature and rational economy which considered its purposes and sought reasonable ways to attain them would certainly not present many of the characteristics of the present—its violent contrasts of well-being, its irrational allotments of individual liberty, its unconsidered exploitation of human and natural resources. It is better that these things be recognized early rather than late.*

National planning can be thought of—in a technical rather than a political sense—merely as normal extension and development of the kind of planning which is a familiar feature of contemporary business. It is not as a technical problem that the idea gives us pause; it is that the implications for other institutions, which we may suddenly see too late, are likely to cause us finally to hesitate and to turn aside from the severe

* Mr. Ford Hinrichs has called attention to the mutually exclusive nature of some of the objectives simultaneously entertained by many of our business leaders who praise the idea of planning. *The Atlantic Monthly*, July, 1931.

logic of events. We have many illustrations of the extension of central office control over numerous units of the same industry, and even over various units of different industries which contribute to one product, such as motors, tires, telephones, or radios.⁴ Even here technology has outrun institutional change. As Mr. Person puts it: "In the face of an integrating technology the government has attempted to preserve primitive forms of competition." And, although so inevitable a movement could not be stopped, it could be hampered and distorted. We might have had some such form of organization as the German cartel system if we had not set out so determinedly, forty years and more ago, to enforce competition.⁵ Instead, we have curious contrasts in procedure and strange monstrosities of form which can be understood only by reference to uneven and intermittent official displeasures. Our industrial structures are reminiscent of weeds grown in the dark, and even those new coordinative features, which have grown in the somewhat brighter twilight of mere suspicion, present strange and unnatural features to be understood only by admission that the functions they profess to be organized for are less important than those which are hidden and unprofessed.

Still, there are a few industries which are wholly integrated or nearly so; and there are many others where integration has gone much further than anyone is prepared to admit. The difficulty with such illegal or extralegal development is that it teaches conspiratorial management; its leaders come to view the government and the public as fair objects of exploitation since their own natural functions are so unjustly repressed. This is important for our purpose because it has led business to represent itself as in some ways much more innocent and immature than it is; and at the same time has prevented the growth, in full light, of technical means of control. Trade associations—to illustrate—are permitted a certain liberty in "business activities"; but "observe that while those things which they may do tend to promote uniformity in details of productive technology and commercial practices, it is those things which they are not permitted to do which are essential to stabilization of an industry"⁶—es-

⁴Cf. Mr. Willard Thorp's familiar census monograph, *The Integration of Industrial Operation* (1924); also his contribution to *Recent Economic Changes*, "The Changing Structure of Industry" (1929). There are numerous relevant passages in the monograph prepared for the World Social Economic Congress by Mr. H. S. Person and published as Document 1 of Section 11 (1931).

⁵It is possible that not the cartel but the integrated, single-ownership enterprise might more readily develop in America. Mr. Domeratzky has shown the difficulties which attend the cartel organization; he appears to feel, after much consideration, that the cartel is rather a temporary device between small enterprise and industrial monopoly, not particularly well suited to other purposes than the limitation of production and the allocation of markets. Mr. Domeratzky develops these ideas in "Cartels and the Business Crisis," in *Foreign Affairs* for October, 1931, pp. 34 ff., as well as in earlier writings.

⁶H. S. Person, "Scientific Management as a Philosophy and the Technique of Progressive Industrial Stabilization," World Social and Economic Congress, 1931, Document 1, Section 11, p. 42.

sential, also, it might be said, to developing such a scheme of "practice" as belongs properly to successful permanent control. We have, at once, illuminating public examples of successful planning, and a hidden development, on a vast scale, of techniques which ought to be brought into the open. But we have enough evidence to make it clear that no technical difficulty bars the way to national planning. What deficiencies follow from its hitherto partly underground growth will quickly enough be remedied under different auspices.

The real barriers are all of another sort. Compared with them, the difficulties of co-ordination within industry are as nothing. In spite of our elaborate efforts of suppression there are highly integrated industrial organizations of vast size; if repressive efforts should cease, such working groups would spread quickly enough everywhere. The question is whether, up to this point, anything much more would have been gained. Perhaps some further economies would result both from more efficient management and from suppression of competitive wastes. But the essential problems would not have been solved. The paradoxes which face us would remain as unresolved as they were when Carlyle or Ruskin denounced the world which contained them or when Marx or George offered their hypotheses of cause and cure. All the essential conflicts would survive.⁷

It is impossible to pursue a discussion of planning beyond the most elementary considerations without raising the question of motive. Most economists, even today, believe that Adam Smith laid his finger on a profound truth when he said that not benevolent feelings but rather self-interest actuated the butchers and bakers of this world; most of them believe, furthermore, that this self-interestedness requires an economy in which profit is the reward for characteristic virtue and lack of it the penalty of sin. This belief must appear, from even an amateurish contact with modern psychology, to be so obviously an instance of wishful borrowing, as to give its persistence something of a stubborn and determined air.⁸ For persons with the usual intellectual contacts of our time to go

⁷ Only if we actually reach this point shall we discover lessons in contemporary Russian practice. But many observers are recording carefully the experience there which may later on be of assistance to us. Cf. for instance, my "Experimental Control in Russian Industry," *The Political Science Quarterly*, June, 1928. Also Hinrichs and Brown, "The Planned Economy of Soviet Russia," *The Political Science Quarterly*, September, 1931.

⁸ There have been some strenuous attacks on the economists' naïve view of human nature. Cf. Carleton H. Parker, "Economic Motives," *American Economic Review*, Sup. I, 1918, p. 212 (later published in *The Casual Laborer and Other Essays*, 1920); Paul H. Douglas, "The Reality of Non-Commercial Incentives in Economic Life," published in *The Trend of Economics*, 1924; A. J. Snow, "Psychology in Economic Theory," *Journal of Political Economy*, August, 1924, "An Approach to the Psychology of Motives," *American Economic Review*, Sup. I, 1925, and the first chapter of his book *Psychology in Business Relations*; R. G. Tugwell, "Human Nature and Economic Theory," *Journal of Political Economy*, XXX, 317, and "Human Nature and Social Economy," *Journal of Philosophy*, XXVII, 449; Charles Horton Cooley, *Human Nature and the Social Order*.

on harboring these views, there has to be some violent rationalization. Surely they must be aware of the growing average size of our industrial organizations; and from this it is a simple conclusion that fewer persons all the time are profit-receivers in any direct sense. Surely they must be aware of the growing separation of ownership and control;⁹ and from this it seems a fairly simple inference that since profits go only to owners, control is effectively separated from its assumed motive. As a matter of fact, how many railway men, steel workers, or even central office employees, have any stake in company earnings? We know that there are almost none; and that this is true from workman to superintendent in most industries. Yet in defiance of such well-known and obviously relevant facts we go on treating motives quite as though our knowledge of men and of industry had been derived from a few eighteenth century books rather than from any contemporary knowledge of the world and of men. The truth is that if industry could not run without this incentive it would have stopped running long ago.

It is even arguable that profits, instead of furnishing an indispensable actuating principle, tend to inject into industry many of those elements of uncertainty which we as economists unanimously deplore. For, being at the disposal of directorates largely divorced from productive operations, they are set aside as surplus reserves. These are intended as dividend insurance, though the intention may not result in accomplishment. But at the same time, they clearly produce insecurity everywhere else.¹⁰ They are optimistically used for creating overcapacity in every profitable line; they are injected into money market operations in such ways as to contribute to inflation; they are used, most absurdly of all, as investments in the securities of other industries.¹¹

*How serious and extensive this separation has come to be is just being revealed. Mr. W. Z. Ripley has referred to the problem. But the most extensive exposé is that of Mr. Gardiner Means in "The Separation of Ownership and Control in American Industry," *The Quarterly Journal of Economics*, XLVI, 68-100, November, 1931. Mr. Means is of the opinion that separation has gone so far that identification of ownership and management is no longer a tenable working concept. One of his most interesting exhibits is that of the Pennsylvania Railroad Company. "Not a single director or officer held as much as one-tenth of one percent of the total stock. The combined holdings of all the directors could not have amounted to more than seven-tenths of one percent and were presumably very much less." Where is the profit incentive to enterprise here? There is none, obviously, which is directly connected with the Railroad. There may be speculative profits from being a director; but that is another matter and is scarcely concerned with management, even remotely.

⁹Profits which are insured can hardly be useful as motives. Businesses by setting up these accounts seek to make certain that this reward will be paid whether or not the activity for which it is paid is carried out. This is only one more instance of the many to be discovered in actual business practice which contradict the claims made for profits as universally necessary motives.

¹⁰Surely the word "absurd" is not too strong. For a business to use its earnings to secure future earnings, not by increasing its own productivity, but by seeking to get dividends from other businesses, is to reduce profit-making to something less social, even, than entrepreneur business. Why should the allocation of our capital resources be at the disposal of enterprises which use them as a form of insurance for their own future profits, and, as a means to this, allocate capital to other enterprises? It would be difficult to devise a mechanism less relevant to the social purpose of capital.

If profits are really the actuating motive in modern enterprise, why is it that so great a proportion of them go to those who have no share in the control of operations; and why is it that industry continues to run even when those who run it have no major stake in its gains? But, most important of all, if profits are so important to our system, why do we allow them to be used in such ways as not only to destroy the source of future earnings, but to create unemployment and hardship amongst millions of people whose only contact with them in any form has been through reading about them in the newspapers?

It is clear that this institution does not, in any real sense, actuate our productive equipment. Furthermore its malign influence is reasonably obvious. Why is it, then, that we protect and argue for it with a violence and persistence out of all proportion to the gains we may expect? Because, it seems to me, we are not genuinely interested in security, order, or rationality. Profits, in the sense in which we use the term, belong to a speculative age, one in which huge gambles are taken, and in which the rewards for success may be outstanding.¹² When we speak of them as motives, we do not mean that the hope of making 4 per cent induces us to undertake an operation; we mean that we hope for some fabulous story-book success. These vast gambling operations are closer to the spirit of American business even yet, with all the hard lessons we have had, than are the contrasting ideas which have to do with constructive restraint and social control. In fact our business men have only a rudimentary conception of industry as a social function, as carrying a heavy responsibility of provision. Industry is thought of rather as a field for adventure, in which the creation of goods is a minor matter. Who among our millions of Wall Street amateurs hopes merely for dividends on his investment? Or who thinks of the securities he buys and sells as having anything to do with an economic function?

The truth is that profits persuade us to speculate; they induce us to allocate funds where we believe the future price situation will be favorable; they therefore have a considerable effect on the distribution of capital among various enterprises—an effect which seems clearly enough inefficient so that other methods might easily be better; but they have little effect in actually inducing or in supporting productive enterprises. All this appears merely from examination of the evidence available to us as economists; if we look into the evidence from the field of psychology, one of the first things we discover is that this main supporting generalization—that the only effective motive for enterprise is money-getting—appears in the psychologists' works as a standard humorous reference to the psychological ideas of laymen.¹³

¹² Cf. the discussion of this matter in Mr. John Dewey's *Human Nature and Conduct* (p. 217 ff.).

¹³ In Charles Horton Cooley's *Sociological Theory and Social Research* there is an old essay of his on "Personal Competition" which contains some trenchant remarks

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It would be untrue to maintain that profits do not supply one kind of motive for economic activity. Business, as we know it, is perhaps chiefly interested in them. This is to emphasize, however, the speculative rather than the disciplined aspects of production. To say that this is one of the institutions which will have to be abandoned if planning is to become socially effective, is to make a sharp distinction among the effects to be expected from dependence upon alternative motives. There is no doubt that the hope of great gains induces enterprise of a sort; and if these are disestablished, a certain kind of enterprise will disappear. The question is whether we cannot well afford to dispense with it. It seems credible that we can. Industries now mature can be seen to operate without it; and new ones might be created and might grow from sheer workman-like proclivities and without the hope of speculative gains.

As we look back at our present system from some time in the future it will be much clearer to us what kind of activities actually were induced by this incentive. At present it is possible to suspect that the decay of the gain-getting motive as an inducement to productive enterprise may have been accompanied by its transfer to essentially antisocial activities. Corporation officers pay too little attention to their duties and too much to the ticker-tape; inside rings exploit the businesses under their control; market cornering and supply limitation become favorite methods of gain-getting. All these and a thousand other activities have far less to do with the productivity of our system than is implied in our easy explanation that gains are the reward for initiative and enterprise and are necessary to call them out. A large share of the initiative and enterprise thus called out might better, perhaps, have been left uncalled, since it obstructs rather than facilitates; we count it good, however, since we reason backward also. Profits are necessary to call out enterprise, we say, but we then say, enterprise called out by profits is necessary—which is not true at all. Nor are they always used advantageously.

Most of us ought not to have been quite so free in our predictions that the institutions of Soviet Russia would break down from a failure of motive. Yet some of us have gone on saying that even in the face of evidence. Not more than a month ago a past president of this association assured me again, as he had done before, that here was the source

about motive. In it he shows how our standards of success have been warped and the need there is for social approval of different activities than command it now. A final paragraph sums up the matter: "It will be apparent, I think, that the view regarding the nature of success here maintained is decidedly a hopeful one so far as concerns the possibility of progress, and wholly opposed to the pessimistic attitude based on the supposed 'selfishness' of human nature and the inevitable predominance of the economic motive. The motive that really predominates, now as in the past, is essentially social and moral; it is the desire to be something in the minds of others, to gain respect, honor, social power of some sort. This being the case human endeavor is above all things plastic, controlled by the spirit of the age. The standard of success, and with it the whole character and tendency of competition, is a social or moral phenomenon accessible to human endeavor."

of weakness which must finally ruin all the Russian plans. There are numerous difficulties there, plenty of chances for failure; but the failure of non-commercial motives cannot honestly be said, at this late date, to be one of them. Nor is this a source of necessary alarm—any more than the technical difficulties need be—concerning any planned economy we may devise. It ought rather to be a source of wonder that a society could operate at all when profits are allowed to be earned and disposed of as we do it. The hope of making them induces dangerous adventures, more speculative than productive; and the uses to which they are put are a constant menace to general security. These conclusions only become clearer as time goes on, yet no movement to limit them or to control their uses has made headway among us.¹⁴ If there had been a more widespread suspicion of this sort over some period of time there would be more reason to expect success for proposals looking toward a profitless régime. The universal confidence in profits, still unshaken in the Western World, is quite likely to hinder measurably the advance of planning.

A central group of experts charged with the duty of planning the country's economic life, but existing as a suggestive or consultative body only, without power, has been advocated by numerous persons and organizations.¹⁵ It is quite impossible to visualize a genuine Gosplan with-

¹⁴ This broad statement would need to be modified in the case of some quasi-public businesses. The Transportation Act dealt with the problem of railroad profits. In certain other ways we sometimes limit the uses of surplus reserves. The part played by these in the call money market during 1928 and 1929 is now well known. In October of 1929 "loans for others" reached a peak of nearly four billion dollars. These loans, of course, were induced by high call-money rates and were unaffected in any direct or effective sense by Federal Reserve discount policies. It was thus the profits of the previous prosperity period which were used to support security inflation. When this crashed so disastrously, profits were made insecure for some time to come. Evidently this is a bad way to use profits even from the point of view of profit-makers. This was recognized by the New York Clearing House Association in 1931. An amendment to the constitution now prohibits member banks from placing brokers' loans for account of non-banking interests. Other associations may follow. Perhaps the New York Association was led to take this action by the withdrawal rather than the injection of these funds into the speculative markets. For these "loans for others" were reduced from nearly four billion dollars in 1929 to one hundred sixty-two million dollars in 1931, thus contributing to disastrous deflation instead of helping to ease down immoderate inflation. Whatever the motive, however, the action of the Clearing House Association is a recognition that the use of undistributed profit-funds must be controlled. Any system of planning would have not only to hedge them about with restrictions, but to direct their uses—if, by that time, it had not been made impossible for them to be accumulated.

¹⁵ For instance by Mr. Gerard Swope of the General Electric Company; also by the Committee on Continuity of Business and Employment of the Chamber of Commerce of the United States. Mr. Sumner H. Slichter discusses the problem in his *Modern Economic Society* (pp. 872-886) but is under no illusions whatever as to the likely results. He does not think it worth while even to consider the possibility of institutional changes which would implement the findings of such a body; and it is perhaps true that even a moderate maintenance of prosperity would prevent such a development. There may come another time, of course, such as occurred in 1914-18 when all institutions are melted in disaster so that they may be refashioned after quite unfamiliar designs. The theoretical temper of our time would certainly favor central planning as the heart of any newly devised scheme of control. The Swope plan evidently originated in the concern of a sensitive executive for the employees of his company. It is inter-

out power; but, of course, this is not to be a Gosplan. It might lay out suggested courses; it might even timidly advise; but certainly its advice would seldom, if ever, be taken. It would be as unnatural for American businesses, which live by adventures in competition, to abdicate their privileges voluntarily, as it is to expect rival militarists to maintain peace, and for the same reasons. If an institution of this sort could not be used as a mask for competitive purposes or as a weapon to be used against more scrupulous rivals, as the Federal Trade Commission has sometimes been, it would quickly gather about itself a formidable body of enemies armed with tried theoretical objection as well as real power. The chief concern of militarists must always be to maintain the conditions of war; and the chief concern of essentially speculative businesses must always be to maintain the conditions of conflict necessary to their existence. The deadliest and most subtle enemy of speculative profit-making which could be devised would be an implemented scheme for planning production. For such a scheme would quiet conflict and inject into economic affairs an order and regularity which no large speculation could survive. Every depression period wearies us with insecurity; the majority of us seem all to be whipped at once; and what we long for temporarily is safety rather than adventure. Planning seems at first to offer this safety and so gains a good deal of unconsidered support. But when it is discovered that planning for production means planning for consumption too; that something more is involved than simple limitation to amounts which can be sold at any price producers temporarily happen to find best for themselves; that profits must be limited and their uses controlled; that what really is implied is something not unlike an integrated group of enterprises run for its consumers rather than for its owners—when all this gradually appears, there is likely to be a great changing of sides.

Strange as it may seem—directly antithetical to the interests of busi-

esting that this typical business document should have arisen out of a particular problem and have proceeded to the consideration of general relationships only reluctantly and partially. Mr. Swope understood that if his employees were to have even a measure of his own security and confidence in the future there must be a stability, which its most enthusiastic defender would not claim for it now, in the whole structure of industry. No one business, Mr. Swope saw, could achieve it alone. There must be common action throughout entire industries. Beyond this, he made only the suggestion of "supervision" by a public body.

The Chamber of Commerce committee *Report on Continuity of Business and Employment* recommended certain long-time measures as likely to assure relief from recurrent depression. The central problem was formulated as "the establishing of a better balance between production and consumption." It is seen that this must mean the restraint of certain liberties: "A freedom of action which might have been justified in the relatively simple life of the last century cannot be tolerated today, because the unwise action of one individual may adversely affect the lives of thousands. We have left the period of extreme individualism and are living in a period in which national economy must be recognized as the controlling factor." This might be thought to be the prelude to suggestions for rigorous control. But what follows is only a suggestion for a "National Economic Council" with advisory duties. Furthermore this is not to be a governmental body but one responsible to the Chamber of Commerce.

ness and unlikely to be allowed freedom of speech, to say nothing of action—it seems altogether likely that we shall set up, and soon, such a consultative body.¹⁶ When the Chamber of Commerce of the United States is brought to consent, realization cannot be far off.¹⁷ It seems to me quite possible to argue that, in spite of its innocuous nature, the day on which it comes into existence will be a dangerous one for business, just as the founding day of the League of Nations was a dangerous one for nationalism. There may be a long and lingering death, but it must be regarded as inevitable. Any new economic council will be hampered on every side; it will be pressed for favors and undermined by political jobbery. It will not dare call its soul its own, nor speak its mind in any emergency. But it will be a clear recognition, one that can never be undone, that order and reason are superior to adventurous competition. It will demonstrate these day by day and year by year in the personnel of a civil service devoted to disinterested thinking rather than romantic hopes of individual gain. Let it be as poor a thing as it may, still it will be a constant reminder that once business was sick to death and that it will be again; that once the expert is applied for, his advice must be taken or refuted. Even if it does so little, and that so badly, as hardly to exist at all, it will still have had a different purpose: the achieving of order. And not improbably it will have been demonstrably wiser than the powers which will be creating the events surrounding it.¹⁸

¹⁶ Mr. L. L. Lorwin distinguishes four possible types of these bodies which he calls: (1) The absolute socialist type, (2) the partial state socialist type, (3) the voluntary business type, and (4) the social-progressive type. I have not thought it necessary to follow this distinction very closely, though it is helpful as a guide to the present large output of plans, because it seems to me quite clear, for reasons I develop, that they all come to the same thing—or will not work. There is really very little choice in the long run; our industrial technique is very fully developed and it is of a certain sort and not otherwise. Any plan must contain and complete it or it will fail. We might once have had the choices suggested by such a classification. We no longer have them.

¹⁷ Committee on Continuity of Business and Employment, Report No. 12 (Oct. 2-3, 1931). Most industrial leaders, with a few notable exceptions, favored the La Follette bill in its Senate hearings. This would, of course, set up a fairly harmless advisory body. But, in contrast to the Chamber of Commerce recommendations, it would be an organ of government.

¹⁸ Hearings on the La Follette bill to establish such a national council have shown something, in spite of the reticence of business leaders, concerning attitudes. They are willing, just now, to try anything, but are not hopeful of results. Mr. Sloan, for instance, asked whether he would endorse the idea of a council, answered that, in his opinion, "we wouldn't get very far. There is too much individuality in business. I don't think we have reached the point where individual manufacturers will give up something for others." And he went on to say that the economic council idea, would in its final form result from evolution and experience. Mr. Wiggin, on the same day (Oct. 30, 1931, as reported in *The New York Times* for Oct. 31, 1931) answered Senator La Follette's question, "You think, then, that the capacity of human suffering is rather unlimited?" by saying, "I think so"! He was asked whether he thought a council could have had any effect in checking the excessive expansion of 1929 and replied, "I don't think so." "Then," said Senator La Follette, "I take it you believe that there is nothing which can be done which will be effective in saving us from these great fluctuations in business activity which we have been experiencing?" Mr. Wiggin answered: "I do not think so. A man only lives so many years, and his experience only lasts with him so many years. New generations succeed and they will make the same blunders. . . .

These will, however, be the only ways in which the qualities of a planning body will be able to show themselves. It will be unable to act and therefore unable to eliminate uncertainties; uncertainties make prediction impossible; and planning is a process of predicting and making it come true, not merely a matter of advising voluntary groups. Mr. Slichter is quite justified in pointing out that no scheme we are likely to adopt would be able to do its work effectively. He asks for instance: "Could it prevent depressions? Could it prevent the great overdevelopment of industries? If a council had been in existence as early as 1920, could it have checked the great overdevelopment of the textile industry, the shoe industry, the coal industry, the petroleum industry, the automobile industry, and others? Could it have solved the farm problem? Could it have prevented the depression of 1930 or substantially reduced the severity of the depression? Could it have prevented our foreign trade from being injured by a general upward revision of the tariff in 1930?"¹⁹ And he is certain that the answer to all these questions is "no."

The answer has to be "no" because the necessary conditions of planning are not established by any "purely advisory National Economic Council." An advisory council might guess but it could not plan; and the difference between guessing and planning is the difference between laissez faire and social control. Under the institutions of laissez faire the sole uses of such a body will be to lead us slowly, by precept and demonstration, toward a less uncertain future. It seems improbable that this will be other than a very reluctant and grudging change.²⁰

Human nature is human nature. Lives go on so long as business activity goes on and we are bound to have conditions of crisis once in so often. You may learn from each one how to avoid that particular difficulty the next time, but you are always going to have, once in so many years, difficulties in business, times that are prosperous and times that are not prosperous. There is no commission or any brain in the world that can prevent it."

I believe that Mr. Wiggin was right and extraordinarily honest. No commission, no brain could prevent crisis in business; which is why business is slowly being condemned and new schemes are being considered for taking over its function.

¹⁹ Sumner H. Slichter, *Modern Economic Society*, p. 876.

²⁰ For many years I was puzzled to know why so much opposition to any extension of government functions existed. It was only gradually and with patient inquiry that I satisfied myself. The reason was that business kept any government corrupt that touched it anywhere. This seemed to be a part of the business system, no more considered wrong by business men than ordinary buying and selling. And wise observers who had seen it going on always and everywhere had concluded that it was of the nature of government to be corrupt and inefficient and that no really important matters, such as economic functions, ought ever to be trusted to it. A longer time still was required to reach the conclusion that all these wise men were wrong about causes. And because they were wrong about this their whole thinking was askew. The trouble lay in the nature of business, and so long as business was left unchanged as to motive and method it would continue to corrupt every government it touched. But it could not be reasoned that, because business had paralyzed governmental organs, governments were inherently bad and ought never to be trusted. Revise business; arrange things so that man's capacity to corrupt the public services is seriously limited or removed, and then—only then—we shall have a chance to see whether the public interest, as over against private interests, could command effective and honest service. From what I know of human nature I believe that the world awaits a great outpouring of energy so soon as

In another place I have pointed out the analogy between the serialization of machines within a factory and the development of a continuity of process throughout industry. The one instance is that of machine linked to machine until the series is finally complete; the other instance is that of process linked to process until a strong web of dependence and contract is completely woven. The analogy can be pursued further. One of the features of recent industrial history, which found us altogether unprepared, was the astonishing capacity for production which seemed suddenly to show itself everywhere in the twenties. Its sudden unexpected appearance has led to absurd and ludicrous subterfuges; even economists have not been entirely innocent of these. I had supposed that one of the stock illustrations of economic fallacy, one which could always be depended on, would continue to be the one which illustrated the futility of making work. Numerous varieties of this old common-sense error have suddenly become respectable in recent months. We have all been asked to assent to the necessity for the stretch-out, for reducing hours of work in the day and even days in the week; we have even heard arguments against efficiency and mechanization; and whole cities and states have gone frankly into efforts for making work. Most economists have either kept silent or have contented themselves with mumbling something about long- and short-runs.

This confusion is the natural result of our lateness in bringing the science of economics even to the observational stage. If we have been watching, describing, analysing industry as we should, we must have known that the greatest economic event of the nineteenth century occurred when Frederick W. Taylor first held a stop watch on the movements of a group of shovelers in the plant of the Midvale Steel Company. And we must have understood, when *Shop Management* was published in 1903 that, perhaps a generation later, the world could be overwhelmed with goods. Taylor had already done his greatest work by then, and notice of it had been sufficiently public if there had been economic ears to hear. Instead of that, writing and teaching went on undisturbed, the subject matter becoming more and more traditional. Perhaps most ironical of all, in view of the coming surplus, was all the emphasis on laws of diminishing returns and the limited number of the seats at nature's table. The forces which were to make the future went unnoticed.

we shall have removed the dead hand of competitive enterprise that stifles public impulses and finds use only for the less effective and less beneficial impulses of men. When industry is government and government is industry, the dual conflict deepest in our modern institutions will be abated.

This is one of the basic reasons why the prospect of a planned economy is so congenial to every other hope and belief I have. I can see in it the eventual possibility of a rewarded honesty for every man which so few have now. And this can come only from a removal of the activities of goods-making and goods-selling from the list of those activities which are treated as games and rackets with few rules, no ethics, no limitation of instruments to be used, and rewards only for results which in the nature of things must involve social harm.

The world is paying now for this dogmatic dream of the economists. And we seem not to have discovered even yet the sources of these floods of goods; we have no idea how they can be regularized and made available to consumers; we have no notions, beyond the foolish and despairing ones which we ourselves reject in ordinary times, what our policies ought to be in days of disaster. We have talked freely about the failure of business men and statesmen; it is time we accepted our share of the responsibility.

If we had had eyes to see the implications of Taylor's work we should have known that the vast expansion of production which must follow would clog all the old channels of trade, swamp the mechanisms of an artificially limited commerce, and end in a period of violent reconstruction. Some of the sufferings of the present might possibly have been avoided. We failed to understand because our eyes were blind to the technology which was revolutionizing the materials of our science. It is important that this should not continue to occur; it will not if we agree that economics is an observational, even if not yet an experimental, science, and if we hereafter agree to search out the consequences of technological change.

When Taylor reduced human working motions to defined elements, they were then of the sort that machines could perform; when machines took over these simplified tasks, one by one, there came a time in every process when the speed and rhythm of the whole was still dictated by a few, or even one, unmechanized task which men must still perform. Human failure periodically disrupted such a plant, there was blocking and choking, confusion and disorder, until a period of slackening and slowing started things going again. But when this last gap between machines had been closed, the whole process could be thought of in new and revolutionary ways. Nothing but product and costs counted any more; men as workers no longer dictated; and there was an end to confusion, and to periodic disruption. The revolution of our industry still lingers in this stage; not all our processes have discovered this final efficiency. But it will not linger there for long. The clearing away of the present debris, and the years of expansion to come will surely witness the emergence of this new technology, matured and pervasive. Shall we be unready again for the floods of still cheaper goods?

The changed attitudes and rhythms which follow the completion of machine series within the factory are quite like those which may take place in another area. Industry after industry may follow the half-dozen now fairly rationalized; each may use in its own plants the new technology of work-elimination; each may solve its own problems of control and co-ordination. But it will all end again in just such a disaster as we are struggling through now unless we take the final step of linking each to each. Unless we learn that the structure and rhythm of *laissez faire* are

inconsistent and anachronistic concomitants of such technology as soon will infuse the industrial process, confusion and disorder will prevail whenever the wilful pursuit of business privileges, as we still know them, chokes the smooth interchanging flow logically belonging to the system of industry, but never yet achieved by human management.

It is necessary to realize quite finally that everything will be changed if the linking of industry can finally be brought to completion in a "plan." It was a reluctant and half blind step which led one executive after another to complete the serialization of his machines. And even then he was sometimes astonished at the results. This new undertaking is vaster; it requires a new and complicated technology which is not yet wholly invented; and it follows not from one executive's decision, but from a thousand preliminary consents, abdications, and acceptances of responsibility. Yet to enter upon it would be to take but a single short step from where we are; the most momentous and final, but still a short one. We have traveled a long road to this threshold we now consider crossing.

The setting up of even an emasculated and ineffective central co-ordinating body in Washington will form a focus about which recognition may gradually gather. It will be an action as significant as the first observations of Taylor; and it can lead eventually to the completion and crowning of that genius' work. The major subject matter of economics during the next few years might well be a particularizing of the implications of this. For we have a century and more of development to undo. The institutions of laissez faire have become so much a part of the fabric of modern life that the untangling and removing of their tissues will be almost like dispensing with civilization itself. We shall all of us be made unhappy in one way or another; for things we love as well as things that are only privileges will have to go. The protective vine makes the ruined wall seem beautiful; we dislike abandoning it for something different. But we shall have to see, no doubt, a wholesale sacrifice of such things, like it as little as we may.

The first series of changes will have to do with statutes, with constitutions, and with government. The intention of eighteenth and nineteenth century law was to install and protect the principle of conflict; this, if we begin to plan, we shall be changing once for all, and it will require the laying of rough, unholy hands on many a sacred precedent, doubtless calling on an enlarged and nationalized police power for enforcement. We shall also have to give up a distinction of great consequence, and very dear to many a legalistic heart, but economically quite absurd, between private and public or quasi-public employments. There is no private business, if by that we mean one of no consequence to anyone but its proprietors; and so none exempt from compulsion to serve a planned public

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interest. Furthermore we shall have to progress sufficiently far in elementary realism to recognize that only the federal area, and often not even that, is large enough to be coextensive with modern industry; and that consequently the states are wholly ineffective instruments for control. All three of these wholesale changes are required by even a limited acceptance of the planning idea.

Planning is by definition the opposite of conflict; its meaning is aligned to co-ordination, to rationality, to publicly defined and expertly approached aims; but not to private money-making ventures; and not to the guidance of a hidden hand.²¹ It is equally true that planning in any social sense cannot leave out of its calculations any industry or group of industries and still remain planning. To do so would be to expose the scheme to the very uncertainty which is sought to be eliminated and to concentrate its advantages in the hands of the nonco-operators. It would be easy for any free industry to erect an empire if all or even many of the others were restricted. It will be required, furthermore, in any successful attempt to plan, that the agency which imposes its disinterested will on industry, must equal, in the area of its jurisdiction, the spread of the industry. Planning will necessarily become a function of the federal government; either that or the planning agency will supersede that government, which is why, of course, such a scheme will eventually be assimilated to the state, rather than possess some of its powers without its responsibilities.²²

The next series of changes will have to do with industry itself. It has already been suggested that business will logically be required to disappear. This is not an overstatement for the sake of emphasis; it is literally meant. The essence of business is its free venture for profits in an unregulated economy. Planning implies guidance of capital uses; this would limit entrance into or expansion of operations. Planning also implies adjustment of production to consumption; and there is no way of accomplishing this except through a control of prices and of profit margins. It would never be sufficient to plan production for an estimated demand if that demand were likely to fail for lack of purchasing power.²³ The insurance

²¹ "The laissez-faire of the nineteenth century was based upon a metaphysics of providential guidance. The planning of the twentieth century rests its case on a philosophical faith in the power of man to promote orderly economic and social change." L. L. Lorwin, *op. cit.*, p. 31.

²² I mean, of course, that only government, in the widest sense, can protect and foster the arts, education, and other similar interests which compete with industry and would do so more formally under any planned division of the national income.

²³ The chief instruments which have been able to develop, under laissez faire, toward order and regularity, have been those "trade associations" referred to before. They serve as illustrations both of the possibilities and the limits our system offers. For, as Mr. Soule has pointed out, they lead to contraction and limitation but offer nothing in the way of enlarged ways of living. If we were to pursue the logic of this development we should have industries organized; we should have control established over production and price. So far the results would doubtless be good. But we should also have production limited to the amounts which would regularly be absorbed by con-

of adequate buying capacity would be a first and most essential task of any plan which was expected to work. To take away from business its freedom of venture and of expansion, and to limit the profits it may acquire, is to destroy it as business and to make of it something else. That something else has no name; we can only wonder what it may be like and whether all the fearsome predictions concerning it will come true. The traditional incentives, hope of money-making, and fear of money-loss, will be weakened; and a kind of civil-service loyalty and fervor will need to grow gradually into acceptance. New industries will not just happen as the automobile industry did; they will have to be foreseen, to be argued for, to seem probably desirable features of the whole economy before they can be entered upon.

This sweeping statement of the logic of planning is simply an attempt to foresee what our economic institutions will be like if we adopt the planning principle. We shall not, we never do, proceed to the changes here suggested all at once. Little by little, however, we may be driven the whole length of this road; once the first step is taken, which we seem about to take, that road will begin to suggest itself as the way to a civilized industry. For it will become more and more clear, as thinking and discussion centers on industrial and economic rather than business problems, that not very much is to be gained until the last step has been taken. What seems to be indicated now is years of gradual modification, accompanied by agonies and recriminations, without much visible gain; then, suddenly, as it was with the serialization of machines, the last link will almost imperceptibly find its place and suddenly we shall discover that we have a new world, as, some years ago, we suddenly discovered that we had unconsciously created a new industry.

These struggles and changes may seem to the future historian who

sumers at prices dictated neither by a constant ratio to costs nor social need for the goods, but only by the industry's conception of its own best interests. This will never be good enough in any social sense to command permanent assent. Besides, the profit fund will always, after a period of expansion, find itself embodied in overbuilt enterprises whose goods cannot be sold. In spite of these obvious difficulties this is doubtless the direction of our development. Mr. F. M. Feiker of the Bureau of Foreign and Domestic Commerce, speaking on November 30 before an organization of brokers, referred to the well-known fact that his Bureau was already co-operating with 142 associations to assist them in planning. He even implied that his Department might soon suggest a plan for industry as a whole. To one whose mind is free of *laissez faire* dogma the peroration of this address must seem to furnish a curious *non sequitur* to its general implications. For, after referring to the many approaches to planning in individual industries, and saying something indefinite about a general plan, he finished in this way: "This program must conform to the fundamental American principle of individual initiative and individual achievement for individual reward. It cannot be imposed by fiat or decree. It must in the end rest upon the intelligence and ingenuity of the American business man. Economic planning by ukase is not for us." Having achieved the feat of getting the word "individual" into one sentence in three places, and having eliminated experts in favor of business men, he thus was able to point to a highly expert and carefully socialized effort of the government as after all quite harmless and ineffective.

looks backward, like the purposive journey of a seedling toward the light. The seedling could not see or feel that light; it merely obeyed its nature. If only society had a greater and more widely diffused power to comprehend and pursue the purposes of its nature we should save ourselves the great waste of energy which goes into opposing and regretting change. The difficulty with this is that society is not an organism; that it has no discoverable nature to obey; that there are no natural requirements for its development. We are not going anywhere; we are merely on the way. For this lack of the purpose, which nature kindly supplies to her lower organisms, society must substitute plans born of intellectual effort, and imposed by awkward democratic devices. This is a hard condition for human nature. We have no great gift for shaping our behavior in accordance with large aims, and no great gift either for tolerating the necessary disciplines. It has been by a series of seeming miracles that we have acquired the technique of control and the industrial basis for economic planning. The still further, perhaps greater, miracle of discipline is needed.

It is perhaps no accident that planning has recently become a center of discussion in economic affairs in substitution for laissez faire. Changes in contemporary philosophy have prepared the way. Chance has substituted itself for the anthropomorphic interpretation of history as a causal sequence. Even the evolutionary principle has the defect, in social history, of making the present seem to have been what we were struggling for. Of course we were not trying to attain any of the institutions we have. They resulted from the chance conjunction of changes. Only the backward look, determined by the view from some contemporary hillock, gives history a meaning. We have, nevertheless, as we are just now dimly beginning to see, the possibility, in a world of discontinuous development and chance combination, of producing a new history guided quite consciously toward foreseen ends.

There is something hostile to mankind in the cold notion of a world which progresses toward unseen ends, regardless of human desires. So long as it was possible we tried to delude ourselves, in one way or another, that purpose existed and that it had a definite reference to mankind. All that comfort is torn away now; and we remain poor, inconsequent creatures exposed to chance developments which are neither kind nor unkind with reference to ourselves, but simply impersonal. It is perhaps characteristic of human nature that we should reject such a view until it became intellectually impossible to cherish our delusions further; and that we should then turn to the only alternative. If there is no order and sequence in events, if the world is indifferent to man, we still remain men. It is perhaps the most magnificent of all human gestures to accept inconsequence and to set out determinedly to bring order out of chaos. I do not regard it as settled that the world is ready, yet, for creating its future according

to a determined purpose.²⁴ But we are at the point where discussion of this possible mastering of future history is beginning to assume practical aspects; and there is undoubtedly some need for haste if change is to come peaceably. It is my view that the prospective discussion ought to be carried out with a clear view of its philosophical implications and of its institutional requirements. If we accept the principle of planning we must accept its implied destruction of the structure of a laissez faire industry.

It is, in other words, a logical impossibility to have a planned economy and to have businesses operating its industries, just as it is also impossible to have one within our present constitutional and statutory structure. Modifications in both, so serious as to mean destruction and rebeginning, are required. It is strange, in a way, that we should have come so long a journey to the very threshold of this new economic order with so little change as is yet visible either in our institutions or our intentions. The reason must be that in this, as in so many instances, only the last steps become conscious. We are incorrigibly averse to any estimate of the logic of our acts; and we are also, somewhat paradoxically, fonder of our systems of theory than might be expected, reluctant to expose them to the tests of reality. Consequently we begin with small unnoticed changes and end by not being able to resist vast and spectacular ones—at which time our systems of theory tumble unwept into the grave along with the outworn techniques they accompanied. When this kind of thing follows a relatively unimpeded course there is rapid industrial change such as once happened in England; when politicians, theorists, and vested interests resist too strenuously, there is a revolution on the French model. How rapidly the pressures rise to explosive proportions depends both upon the visibility of a better future and upon the hardships of the present.

There is no denying that the contemporary situation in the United States has explosive possibilities. The future is becoming visible in Russia; the present is bitterly in contrast; politicians, theorists, and vested interests seem to conspire ideally for the provocation to violence of a long-patient people. No one can pretend to know how the release of this pressure is likely to come. Perhaps our statesmen will give way or be more or less gently removed from duty; perhaps our constitutions and statutes will be revised; perhaps our vested interests will submit to control without too violent resistance. It is difficult to believe that any of these will happen; it seems just as incredible that we may have a revolution. Yet the new kind of economic machinery we have in prospect cannot function in our present economy. The contemporary situation is one in which all the choices are hard; yet one of them has to be made.

²⁴ Cf. the final chapter in Mr. John Dewey's *Philosophy and Civilization*, especially the passage on page 329 in which he attributes our backwardness in social knowledge to our failure to use our already acquired skills in the interest of a "shared abundant and secure life."

DISCUSSION

LEWIS L. LORWIN.—The two papers which I am to discuss are permeated by a totally different spirit. Mr. Harriman is out to stabilize industry and employment under *laissez faire*. As a business man he talks about stabilization primarily in the light of the present depression.

That seems to me a weakness. What we are witnessing today seems to me to involve three major problems. One is connected with the continuing revolution in technology. Another is inherent in the inequalities of wealth and income which affect the flow of goods and the balancing of production and consumption. The third is the change in the relative economic position of the different countries of the world which is affecting the character of international trade and world economy. Any attempt to stabilize industry that does not take all these factors into account is likely to remain futile.

In view of the limitations of time, I shall single out two other points in Mr. Harriman's paper which seem to me important. One is his admission that the present economic system is on trial, and that one feature of that system stands condemned forever; namely, its speculative aspect. It is a sign of progress that the American business world, speaking through Mr. Harriman, is ready to admit that this aspect of business must be curbed and that business must be built with a view to security for all. I cannot say, however, that Mr. Harriman envisages in his paper all the economic implications of this new attitude.

The other point which I wish to call attention to is that which deals with his treatment of the national economic council. Here again, the business world, as represented by Mr. Harriman, is taking a step forward from an individualistic point of view to an attitude which involves some regard for the common interests of national economy.

But here, too, Mr. Harriman refuses to go the full way. His suggestion for giving the power of appointing the council to chambers of commerce and to make it dependent for its financial support upon business is certainly not indicative of a desire to develop a national economic consciousness, but of a persistent tendency to subordinate national life to one group of the population; namely, business.

This fundamental contradiction permeates all the thinking of the business group. While it feels compelled to pass from the concept of individualism to that of national economy, it allows its group interests to dominate its practical proposals in interpreting what is national economy. So that it conceives national economy merely as a business economy directed by business interests and dominated by business motives. It is doubtful whether we can gain much from a national council conceived in such a spirit.

On the whole, I find little in Professor Tugwell's paper to disagree with. I think he is right in presenting the principle of planning as the opposite of *laissez faire* and as involving ultimately a complete economic and social revolution. My comment, however, on his paper is that it does not touch upon the central problem which concerns us most. Granted that planning is a revolutionary principle, the main question is whether it can be applied gradually and peacefully or not.

The statement, presented by Professor Tugwell, is in a sense a tautology. If you start out with a definition of planning which makes of it a complete social revolution, then it is obvious that such a new system cannot operate under the present system. But such an approach is unrealistic. The issue before the world is not that of jumping from a system of *laissez faire* to one of full fledged socialist planning. No such system of economic planning is in existence today. Even in Soviet Russia we have a system of planning which is only in part socialistic and which operates with mechanisms, incentives, and techniques of the most varied and complicated character.

I think the discussion would be more realistic on the basis of the distinctions which I have drawn in a paper on "The Problem of Economic Planning" to which Mr. Tugwell refers in his footnotes. Mr. Tugwell thinks that these distinctions are of little importance and that all planning comes to the same thing. I beg to differ with him on that point. The distinctions of types are not merely abstract classifications but they involve an important principle; namely, that planning can be applied under different schemes of social institutions and in different degrees and different forms, and that the attempt to do so is already in evidence and will become the arena in which the economic and social struggle during the coming decade will take place.

The difference in approach is important not only from a practical but also from a theoretical point of view. For if we assume that the process of economic planning and the machinery for carrying on that process cannot be evolved in any degree under present conditions, there is nothing for us to do except either to accept present day conditions or to advocate a revolution. That is why Mr. Tugwell comes at the end to a dilemma. The present order does not satisfy him. Planning involves a complete revolution in institutions which cannot be achieved at once. He offers us a choice which is no choice at all.

We can avoid this dilemma if we realize the necessity and importance of constructive thinking ahead in the working out of new economic and social principles. The further study of economic planning should consist not only in the elucidation of the principle and of the institutional changes which it involves, but in specific studies of possible partial applications. That would be the most effective method in my opinion of bringing to light the contradictions of *laissez faire* and the nature of the techniques of effective planning.

The two papers presented show that the discussion of planning is in its initial stages. It ranges from an abstract analysis of the general meaning of the term to a discussion of concrete proposals made by one or another group without effort to bring out all the implications of these proposals. One need not be discouraged by this. We are dealing here with the emergence of a new concept which in my opinion is going to be the center of discussion and of economic analysis for some years to come. For economic planning has entered the scene as a practical methodology in one large country. It is becoming clearer that within the system of *laissez faire*, this principle has been gradually building itself up in partial form and that it is now forcing itself upon the attention of the world as a synthetic principle of thinking and action in economic and social matters.

It is because of that that I hope that we shall begin to take the next step in the process of clarifying ideas. There is an immense new field here which must begin to be cultivated. The techniques and methods of planning must be studied wherever they have been applied or attempted, and the possible applications of the principle in limited areas and degrees must be considered. There is opportunity here for all who are eager to aid in bringing reason into our economic and social order.

RALPH E. FLANDERS.—The important points under discussion in these able papers appear to be, first, the possibility and desirability of economic control; and, second, the relative possibilities of a control vested primarily in industry, as suggested by Mr. Swope and Mr. Harriman, as against the more arbitrary planning organization, governmental in form, proposed by Professor Tugwell.

There is in the brief time allotted me no opportunity to balance in detail the possibilities and dangers in the two industrial projects. Both plans accept a high degree of social responsibility; both urge provision for unemployment funds. The Chamber of Commerce report suggests a further shortening of working hours. Mr. Swope's proposals require a definitely organized provision for life and disability insurance, pensions and unemployment insurance; and a novel and useful arrangement permits the benefits to follow the employee when he changes jobs. In return for this social service, he would request mandatory powers in compulsory trade associations for the balancing of production with consumption.

This last item would appear to have two serious objections. It would be based in practice on restriction and allocation of production instead of on an increase of consuming power, and it would inevitably lead to governmental price control.

In my opinion neither plan goes to the root of our difficulties, except as the economic council proposed by Mr. Harriman may do so. After all the lines of action suggested have been worked out and applied, factors which lie outside of the ordinary operations of industry will periodically result in a failure of purchasing power to keep pace with production; and there will be large, rapid changes in the general price level, which will lead to destructive speculation on the one hand, and to destructive readjustment on the other.

The most serious aspect of these proposals lies in the assumption tacitly made that if industry is given certain new privileges in the way of association and control, it can promise to diminish materially the distresses resulting from business fluctuations. This implied promise has been quickly taken up, as is witnessed by a handbill which has been circulated in many of the manufacturing plants of the country, from which the following statements are quoted:

Industry is responsible for unemployment. Industry can give jobs. Politicians cannot do it. Workmen cannot provide jobs, and, except where they are organized, they have no control over jobs. Industry must face its responsibility. . . . We shall hold industry to the issue. There is too much effort to conceal and confuse. We insist that industry is responsible, that

industry can end unemployment and that it shall not escape its responsibility.

This challenge industry cannot meet, and it must not promise to do so, even by implication. It must meet the problem itself, however, face to face; and so met, it will be seen to involve governmental and general financial policies of a serious sort. In solving the problems involved the workers and the leaders of industry will find themselves having wide common interests, instead of being ranged against each other as the handbill suggests.

Professor Tugwell, on the other hand, assumes that competitive industry operating under the profit motive is inherently unstable—that it must be transformed into a completely planned economy to save our mechanized civilization from a disastrous crash. To this it may be answered with some confidence that if an economy of planned detail is the only alternative, the crash is inevitable.

If we could take a position sufficiently far above the surface of the earth and were possessed of sufficient keenness of vision to see from that viewpoint what is going on in the United States as a whole, we would observe rivulets of materials leading from farm, forest, mine, and ocean, gathering into broad streams in their flow towards manufacturing and packing establishments. Thence we would see the finished goods flowing in smaller streams to wholesalers, thence in still smaller streams to retailers, and lastly and finally as subdivided particles reaching ultimate consumers. There would be, if it were visible, a similar but reverse flow of money and credit in its various forms. The larger transactions would involve the transfer of large amounts, the smaller ones of less amounts, while the smallest would require only the change carried in the pocket. The enormous extent of these operations, their unimaginable variety, the incalculable complexity of the courses they take, the innumerable final objectives they reach and serve, are beyond human comprehension or calculation. It is the profit motive which ultimately maintains this labyrinthine mechanism.

When Professor Tugwell argues that the profit motive is ineffective and may be disregarded, he puts the case too strongly. He might properly have said that it is only one of many motives by which men are moved, and that it is often overshadowed by other elements more clearly in the foreground of consciousness. The real function of profit goes deeper than motive. In our economy it is a fundamental requirement for continued existence, and is never long neglected without vital peril. No psychological tests or analyses reveal this fact; it is a solidly established commonplace of business experience. It is the ruling condition which, when effectively met, permits the superposition of many other less impersonal motives. Its useful function is in providing a firm foundation for more spiritual structures.

The degree of success which Russia, without the profit motive, has attained in an arbitrary governance of this intricate problem has been due to three factors. First, her economy is until now a saprophytic one, feeding on the finished mechanisms and processes of more vital and self-sustaining social organisms. Second, her substitute for the profit motive is a discipline that is essentially ascetic; and it remains to be seen whether, in the face of a

world incredibly rich in material possibilities, such a principle can indefinitely maintain its power. Third, such measure of success as has been or is likely to be attained in the near future is at the expense of a simplification of the problem which involves a low scale of living and a standardized existence.¹ Only so can the task be brought within the range of human abilities.

Thus, the basic objections to Professor Tugwell's thesis are that his solution is impossibly difficult if we are to preserve the rich material existence which we now enjoy or can enjoy; and that the alternative of a simplified and standardized existence, brought within the limits of human ability, is so false to our desires and possibilities and to the direction of our historic development as to be impossible except as a forced adjustment to some destructive catastrophe.

It seems necessary, then, to discard the solution by industrial self-regulation as inadequate, and that by arbitrary and detailed economic control as impossible. Is there a third possibility?

Indeed there is!

That possibility lies in a frank recognition of the usefulness of that force of nature which we call the profit motive; and in a purposeful attack on the problem of controlling it in the same way that other natural forces are controlled by the engineer. The problem is akin to that of flood control and irrigation, and of harnessing to human uses in the power plant and transmission line the energy which manifests itself destructively in the lightning.

It is impossible to give details in a brief discussion like this. But the general line of attack may be indicated. Governmental and social control should be so directed as to minimize the element of unsocial speculative² profit, as distinguished from the profit which arises from serving public needs.

There are involved government policies of expenditures, borrowing, and taxation. Also concerned are general financial policies of discount rates, the expansion and contraction of money and credit and of foreign investment. There must be consideration of the kind and amount of industrial and financial information available to the investing public. The problem of stabilizing the value of money must be faced courageously.

The prime essential is a realistic viewpoint which is willing to take account of all the facts; and among those facts none are more significant than the limited effectiveness of industrial policy, and the limited capacity of human intelligence and experience to control in detail the elements of a rich and developing material existence.

J. G. OHSOL.—It seems to me that not stabilization but expansion is what is wanted at present by most industries. Few business concerns would consider their present low levels of activity as a desirable basis for stabilization.

¹ As a homely example we may take the case of women's hats. If these have to be planned for, they will become uniform elements of a uniform. Left to the whimsical control of a profit economy they exhibit a variety, an unexpectedness and, in rare occasions, a beauty which adds much to the interest and satisfaction of living. What gain in rigid intellectual simplification of a vital problem will compensate for the loss of such satisfactions?

² There are socially valuable speculative enterprises such as those involved in exploration, development, and research; and we must recognize the desirability of reasonable speculative profits in these kinds of enterprise.

Also, little consolation can be derived from comparing the present depression with earlier ones. It has certain peculiarities of its own which would seem to make all such comparisons futile. It has created the widest unemployment known in history. It brings out the overcapacity of productive plant facilities in most of the old capitalist countries. At the same time, the new overseas countries in South America, Africa, and Asia are vigorously developing their own industries. Hence, there seems to be little possibility in evidence of absorbing or utilizing the overdeveloped plant capacity in the older capitalist countries. There are few, if any, more important unappropriated territories left for fresh expansion of the industries of older countries. Technological displacement of labor is growing apace with new inventions and with the increasing efficiency in production. Training of displaced labor for new trades would be feasible only if there were labor shortages in other fields; but there seems to be none. Hence the curtailment of labor hours seems essential in order to provide work for more people and to insure their purchasing power. The war treaties, reparations, etc., with the resultant abnormal distribution of gold and subsequent tariff wars, have not only dislocated the world's markets, but have destroyed the purchasing power of several European and South American countries.

I find it impossible to agree with the proposition that moderate depressions are conducive to economy, thrift, and the prevention of waste. The destruction of the earning power of millions of people is a poor economy; the operating of manufacturing plants at a small part of their capacity is obviously a great waste of equipment and investment. It is likewise difficult to subscribe to the thesis that business cycles are unavoidable results of human nature. Are we to assume that these cycles are bound up with some biological or physiological characteristics of mankind? If so, then no national economic council, as suggested by Mr. Harriman, will be able to dislodge them.

Yet, if any planning of industry by a national council is to be effective, it would seem to be evident that such a council must have power of decision and action and not merely give advice. It is precisely the lack of power to enforce decisions which made all previous attempts at regulating the output of rubber, coffee, sugar, silk, etc., fail. If the council is to determine the number of workmen to be assigned to each major industry, if it is to balance consumption and production, if it is to regulate international exchange of commodities, it must have power to make and to enforce its rulings. Otherwise, its advice would probably be of no avail and the various business organizations would continue their activities much as they had done heretofore.

If further proof of the inadequacy of mere advice were required, we need only look at the figures for new construction. In spite of repeated and almost unanimous advice by various authoritative bodies that construction activity should be increased during the depression, the construction statistics show a very marked decline in all building operations.

Lack of time does not permit a discussion of the planning methods adopted by the Soviet Union. I should like, however, to point out that not all planning in the U.S.S.R. is done from above—by the State Planning Commission or the Supreme Council of National Economy. A great deal of initiative is left

to smaller bodies, even to the individual plant with its production conferences made up of representatives of the workers and of the management. These conferences make valuable suggestions and sometimes vote important alterations of the proposed production plan. After careful consideration by the technical personnel of the plant these alterations are usually agreed to and approved by the respective trusts or the Supreme Economic Council. The chairman of the production conference of the plant, who is elected by the workers from among their number, acts as assistant director of the plant.

WILLARD L. THORP.—Both speakers, a leading business man and a leading economist, agree that our economic machinery is in need of overhauling. It ran at extraordinary speed for eight years, and then suddenly refused to operate. The two classic controls, prices and profits, somehow failed to function. And we now insist that we would gladly sacrifice some of the high speed for a more even rate, if it would do away with these long and painful intervals of repair work.

Mr. Harriman has suggested a program with two vital parts, that the anti-trust laws be so modified that industries be permitted to balance production and consumption by voluntary agreements, and that a national economic council be created by business, financed by business, to consider and advise on broad problems of public policy. What promise for future stability is there in this program?

The first suggestion leads directly to the restriction of production in order to maintain prices and earnings. Its contribution to stabilization rests on the assumption that the depression was caused largely by overproduction and that this condition resulted from blind competition. That production exceeded consumption in certain lines prior to the recession is clear. But the very industries in which this situation was most severe are those in which the proposed voluntary agreements would be most difficult. Most manufacturing industries, as far as our sadly inadequate data show, did not record excessive inventories in the autumn of 1929. Nor was overproduction indicated by a sagging of their prices in an attempt to stimulate consumption. Overproduction was a serious factor in agriculture, in construction, and in automobiles. Yet these three industries are peculiarly unable to benefit from the proposed plan. Many attempts for voluntary restriction in agriculture have met with failure. The construction industry, disorganized as it is and producing unique products, cannot adopt a policy of rationing output. And the automobile industry is complicated on the one hand by an extremely variable and unpredictable consumer demand and on the other by a bewildering array of models and price differences.

The prospect of the voluntary organization of any considerable number of important industries is quite as unreal as the idea that all industries are subject to blind cutthroat competition. Mr. Tugwell has already called attention to the degree to which markets are often dominated by large enterprises or by business habits which restrict free competition. Again our knowledge is woefully inadequate, but we are all aware of the development of inflexibility in certain prices which can only have come from informal agreement. In those instances where such control has been publicly avowed, as in the copper in-

dustry, the record does not justify the confidence of industrial leaders in voluntary restriction agreements. Cartels in Germany have not been able to attain stability.

The program calls for the attainment of stability through the restriction of production. If we have learned anything from the recent period, and for me it has largely been a process of unlearning, it is that equilibrium cannot be attained by fixing any one variable. How can a single industry, assuming that all its present members unite in a voluntary agreement, meet the problems of new capacity, of the development of substitute products, of competition for markets, of ability to obtain working capital, of changes in price level, etc. The distinction made by Professor Gay at a meeting of this conference between rigidity and stability is useful here. Stability is a sort of moving equilibrium. The pegging of any one variable may well interfere with rather than encourage stability.

I do not wish to imply that much cannot be done through individual industries in the way of setting their houses in order. Improved accounting, reduced competitive advertising, better statistical records, and the elimination of commercial bribery are all worthwhile in themselves. But little aid to stability can be anticipated in this direction alone.

The second element in Mr. Harriman's program seems to me much more significant. It proposes a national economic council. While in the form proposed its usefulness is decidedly limited, it represents a step in the right direction. Nevertheless, the general proposition which underlies any assumption of advisory activity is that the "truth will prevail." The experience of economists in educating the public, and others, concerning the tariff should be sufficient evidence of the slowness of this process.

The usefulness of such a council lies not so much in any promise of actual accomplishment, but in the turn which it may give to our economic thinking. It will emphasize the need for knowledge, for facts, for understanding of relationships as they bear on the problem of social planning. It will force us to seek to understand more clearly the controls which do exist at the present time, and to give more thought to specific programs of social improvement.

The implication of Mr. Tugwell's remarks is that any hope for successful planning must be international in scope. He clearly suggests the decay of the utility of the national concept in politics. His analogy is quite as effective in the economic sphere. If the League of Nations represents the logical scheme of government, then a world economic council is the logical basis for economic planning. A national organization would be confronted at once with problems of international credits, raw material supplies, dumping, world prices and world price levels, and the like. The only alternative to world co-operation would be a severe isolation policy, withdrawing from all foreign economic relationships.

Economic planning for the United States is still far in the future. There is no hope for any considerable achievement at the present time. Any developments which may be brought by the depression will be of little avail when the next period of prosperity sets in. We must and doubtless will go through further economic difficulties before any basic change is made. When

laissez faire has brought a sufficient number of calamities, then we will begin to think of real economic planning.

WILSON COMPTON.—One of the objections frequently made to the principle of industry-planning is that it will stop progress. Well, if we can stop some of the kind of progress we were making in the last decade, we will be at least that much better off. But to secure orderly processes in industry and commerce and in the production and distribution of commodities, it is not necessary that science and invention be curbed or impaired. It is necessary that their social and economic consequences be controlled. Science is our greatest promise, also our greatest threat—a promise if it continues the servant of man; a threat if it becomes his master.

Stabilization without invention is stagnation. Invention without stabilization is chaos. The problem is not to choose between the two, but to devise the means of combining them in such manner and under such intelligent direction and control as to secure the largest net advantages of each.

Economic planning is not a new idea. It has merely been clothed with a new significance. Recent events nation-wide, even world-wide, have given it a mighty impulse. We have found that science and technology are merely a means to an end, not, as some have boastfully proclaimed, an end in themselves. Technology has given us the physical means of higher living standards; but not the means of avoiding impoverishment in the midst of plenty. Our problem, fortunately, is one not of irreparable famine, but of uncontrolled, although not uncontrollable, surpluses. Our technological appetite has outstripped our economic digestion. It promises so to continue until our mastery of distribution is comparable to our mastery of production.

This condition and its solution readily inspire speculation in social, economic, and political philosophy. Nationalism by some is said to be doomed, capitalism to have disintegrated, and individualism to have become a decadent, threadbare, and old-fashioned fetish. Certainly he who has eyes to see will not have failed to see symptoms of fundamental change, especially during the past decade. But to draw such comprehensive and dogmatic conclusions seems at least a bit premature. After all, society is composed of a number of individuals. The welfare of society is not distinguishable from the welfare of the individuals who compose it. Social motives as distinguished from the motives of the individuals who compose society are merely a convenient fiction.

I do not think we need assume the abandonment of the ideals of individualism. We may hope to derive substantial gains from deliberate forward-planning of production and distribution in our various lines of industry and commerce. We know that our economic structure has become amazingly complex, that single industries or groups of industries can no longer isolate themselves; that any industry, perhaps through no fault of its own, may be made the victim of conditions over which it has no control. Economic and commercial stabilization in any industry therefore may not be secured wholly apart from general industry stabilization. Nor, in fact, with few exceptions, may industry in a single nation maintain immunity from world-wide economic influences.

Economic planning and enforceable adherence carried to its logical ex-

treme would therefore mean complete international controls—in effect, an international, supernational government. Such a fantasy may have a philosophical appeal, but no practical advantage to that large segment of the American people who hope for the establishment of direct, immediate, and, may I say, practical securities against the adverse consequences of the “business cycle.”

It is said that economic planning is the process of predicting and of making the prediction come true. This is a matter, partly of definition, partly of opinion, and not much of fact. Forward-planning to be useful does not necessitate the abandonment of individual enterprise, or of the opportunity to follow individual judgment. Social judgment separate from the combined judgments of individuals is after all a mere convenience of definition. There is no thought without a thinker, no judgment without a judge, no action without an actor. In discussing social controls, we may abolish individualism by definition. But we cannot abolish it in fact. It may be subjected to controls and limitations. It may be subordinated. It may be made impotent of effective expression, but it cannot be eliminated. The choice is not between the suppression of individualism on one hand and its uncontrolled freedom of action on the other but is whether it is desirable that individual initiative be suppressed or be given intelligent guidance.

Many trade associations in American industry provide a reasonably effective means of organizing and directing the motives of industrial self-government. These associations are a product of group ideals and group interests. In the aggregate and in daily practice they represent a vast progress in self-government of industry. Their extensions into the field of industry-planning are normal and logical, and should be encouraged. Whether in the long run they will prove to be adequate cannot be, and need not be, determined now.

The industries, for example, with which I am associated—the timber, lumber, and wood using industries—have developed a comprehensive system of current information on supply and demand and on consumption and production prospects. Through the National Lumber Manufacturers Association, these industries secure:

1. A weekly telegraphic report from nearly a thousand mills on the week's production, sales, and shipments of lumber, and the current condition of stocks and unfilled orders.
2. A four-weekly summary of production, sales, and lumber movement.
3. A four-weekly analysis of expected production of lumber in each region during the next two following periods of four weeks each.
4. A monthly analysis of the lumber market including forecasts of the next month's consumption as reported by about 2000 correspondents and observers in every part of the United States. This information, in turn, is made available not only to manufacturers and distributors of lumber, but to the wood-using industries, purchasing agents, carpenters' unions, interested loan and finance institutions, and public agencies.

Even more distinctive is the quarterly survey of lumber production, inventories, and consumption, instituted during this year by the United States Timber Conservation Board. This board was established a year ago by the

president of the United States to consider the "problems and consequences of overproduction in the forest industries" with view, to use his own phrase, to developing "remedies through concerted programs of private and public effort." This is a unique undertaking, frankly in the direction of public and private co-operation for industry stabilization. One of its chief features is a quarterly survey of lumber production, stocks, and consumption. The survey is made by a special lumber survey committee composed of men not themselves engaged in the industry, but familiar with its facts and with the markets and uses for its products. Its reports have been printed and widely distributed.

Based on its findings of prospective consumption, the lumber survey committee has recommended specific production quotas for each important region and species of lumber production. The frank purpose of these recommended quotas has been the gradual and systematic reduction of the surplus inventories which were crushing the lumber and wood-using industries; the establishment and maintenance of a reasonable current balance between production and consumption; and the orderly distribution of forest products. The functions of this survey committee are, of course, only advisory. There is no authority and no purpose of enforcement other than by the persuasive appeal of fact and logic. Yet it has been measurably effective.

That this is so is evidenced in the fact that during a year in which lumber consumption has been the lowest in this century, and the industry's capacity to produce nearly the highest in its history, the inventories have been reduced 15 per cent and the burden of balancing production and consumption has been more evenly shared among competing regions than at any previous time.

The lumber industry has 20,000 producing units, large and small, distributed through thirty-six states. To secure a common understanding of the industry's vulnerable economic condition, to say nothing of a common course of action to improve it, is manifestly difficult. If it can be measurably done in so widely decentralized an industry, the fair presumption is that it may be done elsewhere. The important fact is that it be done as a consequence of the intelligent action of competitors and not by the fiat of public authority. After all, the wisdom of the government is not greater than the wisdom of its people.

Trade associations have been referred to as the most influential present forces in American industry in encouraging and facilitating systematic national planning. The principal executives of about 500 trade associations, including the national association in nearly every important American industry, are represented in the membership of the American Trade Association Executives. For the professional guidance of trade association executives this organization has established a Committee on Statistics and National Planning. Its purpose is to explore the further possibilities of industry stabilization through the deliberate forward-planning of production and distribution, with the aid of the frank co-operation of private and public agencies.

The trade associations through organized voluntary co-operation, industry by industry, afford at present the only important facilities for such purposes. These facilities should be diligently cultivated and extended. They will be

much aided by some such form and agency of national economic planning as has been outlined by Mr. Harriman.

The eventual establishment of industrial self-control, if pursued along these lines, through the agencies of voluntary co-operation in industry and commerce, may, not unlikely, fall along the following lines:

1. Establishment of dependable and enforceable controls of finance and credit. Credit has become the universal common denominator which may dilute or even dissolve an industry. Public control of the major credit instrumentalities and the major credit policies has been shown by impressive experience in recent years to be necessary to the security of industry and commerce. It has been said that the present general economic distress is due largely to the accumulated consequences of unwise and unwarranted past use of credit. If so, it is fair to say that the control of credit should be made so secure that no industry hereafter will be made the helpless victim of the ignorance or the deliberate folly of another.

2. Industry-planning to secure stabilization. This, with the general guidance of a suitable national economic planning agency under impressive auspices, may be undertaken by industries separately through their trade associations.

3. Research, to insure continued technological progress.

4. Insurance against the inevitable uncertainties and contingencies which seem to be inherent in any scheme to secure the benefits of both stabilization and applied science, and at the same time to avoid the extremes of stagnation on the one hand and of economic chaos on the other.

Economic planning, under such auspices, ought to be effective in reducing "bad times" to a minimum. Beyond that minimum, the "good times" may be made to pay the cost of tiding over the "bad times."

Individualism, with science as a generator, stabilization through industry-planning as a conservator, and insurance as a security against the extremes of both, may, I believe, be made ultimately to provide an effective protection against the adverse consequences of the swings of the "business cycle."

ROUND TABLE CONFERENCES INSTITUTIONAL ECONOMICS

W. H. KIEKHOFER, *Chairman*

JOHN MAURICE CLARK.—I intend to discuss the place of institutional thinking in economics, but I shall not attempt to define institutional economics. It may be defined narrowly as only that kind of thinking directly concerned with institutional aspects of economic life, or, broadly, as all thinking genuinely oriented by a serious regard for, and study of, such institutional aspects. Neither shall I attempt to specify the precise place of institutional thinking in economics. Different thinkers employ it differently, and there is no reason for supposing that the possibilities are exhausted. Yet not any and every treatment of institutions is "institutionalism" as the present-day institutionalist means it. He appears to define it in terms of certain characteristic conceptions of the nature of institutions and certain attitudes toward them.

He conceives them, not as eternally natural verities, nor on the other hand does he conceive them, as Bentham appeared to do, as mechanisms to be devised or altered in the fashion in which an engineer devises or alters physical mechanisms to produce a given desired result. They are conceived rather as evolving patterns of human behavior, though subject perhaps in rare instances to revolutionary change. They are played on by a broad range of motives, not the outcome of a single one nor of a segregated group of "economic" motives. Being forms of human action, they are not sharply distinct from the human nature which operates within them; hence a modern institutionalist will not hold to formulas which say that institutions are faultless and the trouble lies in human nature; or that human nature is all right and the whole trouble is with our inherited institutions. He is more likely to hold that human nature is itself a social institution. And he is likely to hold that institutions have their own continuity and life processes distinct from, though not independent of, those of the individual human beings who work within them and whose collective behavior goes to make them up.

The institutional attitude, or group of attitudes, may be approached by telling what it is not. It does not "take institutions for granted"—which seems to mean taking for granted a "stereotype" as an adequate representation of an institution. It does not adopt the "wholesale" view that we must choose between pure competition or pure monopoly, or between pure private enterprise and pure socialism. It takes for granted "retail" or piecemeal change as a continuous process, but it does not view such changes as did the typical nineteenth-century liberal, who assumed that the essence of the institution (the stereotype) persisted unchanged by such piecemeal reforms of particular abuses. He views them rather as steps in the process of cumulative change or evolution. He does not view the stereotype as natural, and specific changes as unnatural or artificial; all forms of behavior are equally natural.

The modern institutionalist does not possess the skepticism of all changes which marked the apostle of natural rights; but he may have a skepticism of his own, of a different sort, based on the difficulty of either stopping or guid-

ing the processes of evolution. On the other hand, he has a natural kinship with behaviorism, and the behaviorist seems to have a natural affinity (which is probably neither logical nor necessary) for the view that human nature can be changed to any extent by changing the environment.

The variety of work coming under the general head of institutionalism may be exemplified by the works of Sismondi, of Marx, of the German Historical School, of Veblen, of B. M. Anderson, of C. H. Cooley, the historico-deductive work of Sombart, the studies of legal institutions found in Ely's *Property and Contract*, in Commons' *Legal Foundations of Capitalism*, and in the studies of Roscoe Pound, R. L. Hale, recent works of W. H. Hamilton, and a growing number of the younger law writers. The work of the institutionalist in the quantitative-descriptive field is typified in the studies of W. C. Mitchell.

As economics progresses in the direction of a description of economic behavior, serious questions are raised, not only as to the vitality of the older types of economic law, but whether anything deserving the name "economic law" can survive. Sequences there are, but they are relative to time and place. The Federal Reserve system has altered the "laws" of banking panics, and our ambition to alter the business cycle may some day bear fruit. The older conception of "natural levels," obsolete as it may appear, may survive by adapting itself in two directions. It does not explain dynamic facts, but it may still be a useful step in isolating their various causal components—something which mere description can never do. And in modified form it may serve to suggest types of limits to which reforms or evolutionary changes are still subject.

But these "natural" levels are not really natural; they are merely logical; and we are learning that institutions are commonly mixtures of logically incongruous elements. This is true of the existing system, and still more true of any plan for controlling the business cycle without abolishing private enterprise. To an institutionalist, that fact should not a priori be a fatal objection.

PAUL T. HOMAN.—I shall undertake to make an appraisal of the accomplishments of institutional economics.¹ An institutional economics, differentiated from other economics by discoverable criteria, is largely an intellectual fiction, substantially devoid of content. Fifteen years ago it was a faith, and to this faith I assign important historical consequences. The faith was that an adequate organon of economic thought could be achieved by the accumulation of data and analysis of it in terms of an evolutionary process. It included a negation of the picture of economic relationships imbedded in systematic economic theory. The negation extended not only to the ideology, but partially to the methods used in formulating that body of theory. The constructive faith supported the negation, but both were important. They caused the whole structure of economic theory to be subjected to searching and critical scrutiny. Time does not permit me to develop what seems to me to have happened to systematic economic theory. It no longer furnishes an economic philosophy. Its more comprehensive generalizations are in disrepute, or else are labeled with proper warning of their partial or hypothetical character. Its essential service of furnishing paths through the jungles of data and tools of thought

¹ Professor Homan's paper will be published in full in the March, 1932, number of the *American Economic Review*.

for the labors of analysis have been made sufficiently plain to all except the blind. Its waning importance as a picture of the economic order is plain. Its incompleteness as to methods and generalized results is not open to question. But, since systematic theory is not my topic, it may be merely said that its reduction to its minimum terms of intellectual and analytical usefulness has demonstrated its necessary functions.

In addition, supported by a negation and clothed in faith, some economists have pursued their labors with fruitful results. One would be ignorant indeed to deny the importance of the work of men called institutionalists. He would be misinformed if he supposed that their faith was not in some measure responsible for directing them toward the tasks they have taken up. But they have not created an institutional economics. It is the belief which they have that is the astonishing current fiction.

HUGH M. FLETCHER.—The methodology of institutional economics has been accorded but little attention. One reason which is advanced in explanation of the neglect is misleading as to the nature of this body of thought, and to designate institutional economics as a body of thought is an assumption. I refer to the lack of progress in the logic of the inductive sciences since the publication of Mill's *System of Logic* nearly one hundred years ago. The implication is that neo-classical economics is deductive and that institutional economics is inductive. The distinction is by no means so simple. The institutional theorists, like other theorists, do not begin to construct their system at zero. *Nihil ex nihilo fit*. They do not begin even with the bare facts of economic life, whatever these may be. At best they begin with some conception of what they want to do—in other words with purposes and preconceptions. These warp their selection of facts, and a selection of facts results only in generalizations more or less unreal, as unreal as the postulates of neo-classical economics. Both bodies of economic theory face the same problems of methodology. The threadbare distinction between deduction and induction does not meet the issue at all.

A significant distinction is that between institutional economics and inductive verifications of the theories of neo-classical economics. Some of the older theories are plainly so relevant to special considerations of time and place that inductive verifications are not worth the effort required. The older theories, nevertheless, will always remain unusually profitable subjects of study, but not from the point of view of their rightness or wrongness. These terms have in fact little if any meaning. Economic theories as such are neither right nor wrong. They are merely relevant to the underlying circumstances which made their appearance possible, and changes in such circumstances account for their demise—except in the annual crop of textbooks intended for undergraduate consumption.

The distinction between induction and deduction does, nevertheless, open up an interesting phase of the subject. It is alleged that neo-classical theorists start with postulates and reason therefrom, and that institutional theorists start with facts—or a selection of supposedly relevant facts—and reason therefrom. Facts as facts are of no significance—a statement which reminds one of Huxley's misleading remark as to the nature of a tragedy; namely,

that a tragedy is a beautiful theory slain by an ugly fact. Facts, to repeat, are significant—whether for economic reform or for the construction of a system of economic theory—only in so far as they can be formulated into generalizations. Just so soon as the institutional theorist commences to generalize he parts company with the facts, for necessarily his generalizations cannot sum up all the facts. The facts of economic life are too diverse for this. In reality the expression “all the facts” has no meaning. Witness, for example, the futile attempts to construct generalizations as to the nature of the business cycle—the happy hunting ground of the institutionalists.

The distinction between implicit and explicit postulates merits attention. By the former is meant postulates which the theorist himself more or less fails to recognize. They are ordinarily reflections of the circumstances of his time and are accepted quite uncritically. An excellent example is found in the work of Ricardo. As to explicit postulates, by these we mean postulates which are fully recognized and stated with extreme care, and within the limitations of which a theorist proceeds to construct his system. The best example is doubtless the work of John Bates Clark. The point which I desire to make is that institutional economics must begin somewhere, and that as yet it has done little or nothing in the way of formulating its explicit postulates. In this connection it is important to raise a rather vital issue. It is stated that institutional economics has destroyed the postulates of neo-classical economics and that this body of thought need therefore no longer concern us—a statement which completely misconceives the nature and functions of postulates. Postulates, to repeat, are of two kinds, implicit and explicit. The latter can change only by the deliberate decision of the theorist who sets them up for the express purpose of constructing a system of economic theory. As such, they are neither right nor wrong; these terms again have no meaning. If a theorist asserts that his postulates are so and so, one can challenge his system only in so far as it fails to run true thereto. To be sure one may argue that his postulates might be better than they are, but this raises a quite different problem, the problem of finding the best set of postulates, whatever “best” may mean in this context.

As to implicit postulates, the material and intellectual circumstances of the time which the theorist accepts unwittingly, the same problem appears in connection with institutional economics as in connection with other bodies of economic theory. The relativity of classical political economy to the circumstances of late eighteenth and early nineteenth century England is too evident to require exposition. As to the relativity of institutional economics—and surely no one will deny its relativity to the material and intellectual circumstances of its time—a body of thought, be it noted, is supported from below, not suspended from above after the manner of orthodox theology. To put the matter technically, institutional economics is epiphenomenal to a given set of conditions. I venture the following suggestion as to the relativity of such generalizations as the institutional theorists have achieved, if any; namely, that institutional economics purports to provide a basis for remedial action in the hope of improving, if not the worst of all possible economic worlds, then at least a world which is as bad as we care to see it. Again, to

put the matter technically, institutional economics is epiphenomenal to a planned economy—a planned economy in contrast to the natural or spontaneous economy of classical political economy. As to the relativity of institutional economics to intellectual conditions, it is apparent that this body of theory—again an assumption—is but the economic counterpart of the experimental and pragmatic eclecticism of the twentieth century, and will shift in character as its intellectual foundations shift. In the course of time, therefore, as material and intellectual factors change, institutional economics will go by the boards—a rather wooden way to put it—just as economic orthodoxy is now going.

MAX J. WASSERMAN.—The conception of the human element by the institutional school may well be called personality rather than man, for it stresses the powers, the force of action, the perquisites, and the attributes which humans and groups have conquered for themselves in organized society. Personality is man conceived as a bundle of rights and powers; it is man in his institutional aspects. Conceived in this way, personality appears as an element of varying importance, of changing magnitude and intensity. It is clear that man can use a number of institutions in order to lend action to his will; his personality will increase as he uses a larger number. Some institutions are more efficient than others and, over time, some gain in vigor while others lose. The magnitude of personality, then, will increase or decrease as institutions of different types are utilized.

The following paragraphs will attempt to show what institutions are utilized to extend and contract personality, how both individuals and groups employ them towards this end, and the results of such utilization upon economic theory.

The most obvious institution employed in the extension of personality is private property. After those internal qualities which we commonly regard as inseparable from man—what one is—come those external qualities which the régime of private property confers—what one has. Aggrandizement through the use of property is so manifest that long explanations of it are hardly necessary. It is patent that one's position enlarges and contracts with the accretions and diminutions of property.

The desire to possess and control has led to the creation of the institution of credit. In part, credit is a function of property—the employment of what one has towards the obtainment of what one desires but has not. But credit is not always a perquisite of property; much credit is granted on the basis of the personal qualities included in the vague term, "confidence." The use of credit serves to enlarge one's sphere of influence, for it enables one to multiply the effectiveness of economic activity, to realize plans which without it must remain unachieved, to hold and control with reference to influence upon prices and distributive shares, to create and produce beyond the scope permitted by actual assets, to trade and move goods where its absence would render this impossible, to augment the opportunities for profit.

A third institution, the corporation, not only serves a similar goal, but does it without the risks attached to credit. It is not, as credit, an element attached to the qualities of man and his possessions. It is rather an extension, or more

exactly, a multiplication, of the personality of men considered as both individuals and as groups. It is a means of doubling the original powers of man; a method of creating an *alter ego*. Some legal scholars maintain that there are two types of personality: physical and corporate or societal. From the point of view here maintained there is but one type—societal—for physical beings, just as corporate entities, may be said to enjoy only those attributes which society, through its laws and customs, assigns them. The important position which many enterprisers have attained may be partially explained by their self-multiplication through the use of groups of corporations.

Politico-economic institutions giving expression to the ideals of democracy and laissez faire also serve to determine human dimensions both by increasing the rights of some and diminishing those of others and by extending or contracting the field in which these rights may be exercised. These institutions serve to augment or lessen men considered both as members of a group and as individuals and in this way differ from the institutions already named above.

Proletarians have but rarely made use of institutions such as property, the corporation, or credit for the purpose of increasing their individual powers and capacities. While, under a system of democratic laissez faire, such an aim is doubtless not illegal, the current capitalistic system does not conveniently provide for it. Workers, if they cannot easily enlarge their individual personalities, may, through union, give themselves a group force. The inability of the worker to utilize with facility those means of individual development at the disposition of the enterpriser places him under a handicap which the creation of groups does not entirely overcome. There is, in the institution of the wage contract, a positive impediment to the development of the worker as a personality which serves at the same time to magnify the employer. The former is tacitly required to be loyal to, and to espouse the cause of, the latter. This minimizes the worker and redounds to the advantage of the enterpriser. Of course, certain employments may offer compensations resulting from what is termed "connections" or "prospects" which may offset this shrinkage.

It is not here maintained that these are the only institutions which react upon the magnitude of personality, that such reaction is their principal effect, nor that they were rationally conceived with this aim in mind. In practice, however, they carry as one of their functions the possibility of determining the measure of personality. What use, one may ask, can be made of this conception?

Since economic organization is the work of man it will necessarily have those characteristics which the nature of man gives it. It will receive the impression of man in proportion to his power to imprint his nature upon it or to the capacity of his personality to dominate it. Society will resemble chiefly those who are able thus to utilize institutions, for society is not a cross section of many equivalent individuals but of personalities having widely differing values. The present business depression affords a timely illustration of this theory. A part of the blame for our situation is commonly ascribed to the errors, the bad judgment, the lack of foresight and plan, of our business leaders. While the business depression is far too complex to lend itself to such a simple, unilateral explanation, these elements are, without doubt, factors in the

situation. The force which these enterpriser shortcomings wield in our economic life can be understood only when the relatively large magnitude of their personalities is grasped. These leaders have employed institutions to aggrandize their personalities. They are relatively large factors in our economic life because they are large bundles of rights. Consequently their decisions carry great weight; they are multiplied and ramified by all the institutions attached to their persons. It is possible that the structure and mechanism of the economic organization, which the institutionalists have undertaken to interpret, may find a partial explanation by means of the notion here outlined.

Since the theoretical phases of the science are held to be the results of man's calculations, it is necessary to consider the relative importance which these computations may have. Classical and Austrian theory have shown some of the elements which here apply. It may contribute to the analysis if consideration be given to the weight which expanding or contracting personality can give these calculations.

Further, the idea here presented may have some utility in the economic interpretation of history. Among other things, the rise and fall of classes and groups, the domination of individuals and interests, may be partially explained by its use. As new institutions came into being, they conferred upon some new strength. The decline in the relative importance of some of the older institutions served to sap the strength of others who depended upon them. The personalities of individuals and classes varied in magnitude as the institutions which they used altered in importance.

Finally, if institutions are attached to men, if they are shown to be but devices for carrying out the will of men and lending force to this will, institutional economics will become, in addition to a social science, a human or homo-centric science. Some conceptions of institutionalism unfortunately appear to overlook this aspect. A study of the rôle of personality in its relations to institutions may help to remedy this defect.

WILLARD E. ATKINS.—Institutionalism need not be a uniform thing. Its diversity indicates that even secluded economic philosophers see in the world contradictory views and conflicting interests. Lively minds disagree, if not about facts, about their meanings; so should economists.

Davenport's economics expresses his emphasis upon acquisitiveness and discontent with muddled socio-ethical idealism. Commons' classification of phenomena supports his philosophy of social control. Adam Smith's economics expressed his willingness to trust men, not kings. Systems of theory are and should be as diverse as philosophies of life.

Yet, amid disagreement, institutionalists have this core of agreement: (1) group behavior, not price, should be central in economic thinking; (2) more attention should be given to uniformities of custom, habit, and law as modes of organizing economic life; (3) individuals are influenced by motives that cannot be quantitatively measured; (4) economic behavior is constantly changing; therefore, economic generalizations should specify limits of culture and time to which they apply; (5) it is the task of the economist to study the sources of the conflict of interests in the existing social structure as an integral factor rather than a something diverging from a hypothetical norm.

Moreover, to institutionalists, economics, like the physical sciences, should describe rather than explain. Though incompleteness is inherent in all descriptive generalization, irrelevance need arise only from the deliberate erection of hypotheses such as the formal equilibrium, incapable of empirical test.

Nor is institutionalism in conflict with every aspect of classical economics. Marshall, Mill, and Ricardo told part of the institutional story in occasional paragraphs, sentences, or footnotes. To the modern institutionalist, the classical footnote becomes a book, and the classical book becomes a footnote needing revision.

FRANCIS D. TYSON.—Though minimizing the importance of the methods of the newer approach to economics, Professor Fletcher in his logical exercise accepts the main contentions of the institutional trend he is critical of. "Economic theories as such," he says, "are neither right nor wrong; they are merely relevant to the underlying circumstances which made their appearance possible, and changes in such circumstances account for their demise." He grants the unique relativity of classicism to the circumstances of late eighteenth and early nineteenth century England. In making reluctant admission of the lack of universality of neo-classicism—"not so evident as its critics like to believe"—he mentions "the relativity of neo-classical economics to the circumstances of the late nineteenth century."

This seems to me an error. He misses the main contention of the progressives; namely, that neo-classicism is, in large part, not relevant to the facts of that recent time, but rather to the older classical postulates formulated a century earlier. Neo-classicism represents a refurbishing—a labored, if competent defense of older generalizations, which interpreted in oversimplified fashion the life and motives of the English dominant classes. What the newer writers object to is the refusal of many academic economists to test old postulates, like free competition, in the light of current industrial facts. It was this stultifying procedure, followed in charmed circles in American as well as British universities, and futilely claiming adequacy as social science for a revamped orthodoxy, which led Professor Mitchell to despair of dialectical sophistry, and to point out that this body of futile theory would not be disproven, but simply would be ignored as inconsequential.

The insistence that an abstract dialect analysis is adequate in economics has not passed, but still wields great influence. If Professor Homan doubts this, will he read from this point of view Professor Carver's able, thorough treatment of "The Shorter Working Day and Week," presented at a session of this year's conference (cf. p. 8). If the theoretic assumptions are granted, the reasoning is masterly and utterly convincing. But the realistic student of industry today will question whether such an approach really comes to grips with a pressing factual problem of economic policy. There is danger that such an economics will continue to essay the rôle of a century ago in offering irrefutable argument against the possibility of economic and social reform. Is it not questionable whether such theory has any valid claim to speak with authority on vital industrial issues? Unregenerate neo-orthodoxy has made a break with old methods inevitable. Call the more realistic ap-

proach institutional, if you do not object to an informative term that is provocative of thought.

The progressives are, I feel, seeking modestly and open-mindedly—with due regard for the high intellectual traditions of the economist's craft—to make a more empirical approach to the study of economic behavior. They aim, in entering a broader province, to review customary instrumental activity, including law and the state, as well as the pricing system, studying, as Professor Commons indicates in his recent article, the functions of bargaining, rationing, and managing; working rules of action; and the social relationships of dependence, conflict, and order. This newer economics, again, stresses the importance of non-pecuniary as well as of pecuniary motives.

If important contribution in economics is to be made by the newer approach—and few informed students will question that it has already been made—may it fairly be said, as Fletcher does, that “institutionalists are in a similar boat with the classicists, and dare not rock it, for they too will be carried to sea by the shifting currents of economic circumstances”? This is simply psychological defense of the old; to continue the maritime figure, it is like a man in a row boat on a stormy sea finding consolation in the hope that the same hazard he faces will sink an ocean liner.

Institutionalism, I submit, may claim to be more vital than neo-classicism as a technique of economic study. It seeks to pursue a more scientific method, aided by statistics, in continuously resubjecting its tentative generalizations to factual verification in the complex actual world. In that sense institutionalism is more “right” than classicism, because more effective and more significant today in renewing the difficult task of building an economic science.

WILLIAM W. HEWETT.—As yet no school of economic thought has succeeded in building up a body of comprehensive theory that may serve as an adequate substitute for the rigorous training received by a careful study of classical economics. The most severe indictment that I can advance against institutionalism is the inadequate preparation it affords to students of our science. Before specialized work can be carried on in the various applied fields of economics, a firm foundation must be built. It is significant that some of the best writers commonly classified with the institutionalists have had excellent preparation in the old classical doctrine. My experience with graduate students indicates that present-day institutionalists are not passing on to their classes the equivalent of the training they received. The maze of interrelationships of economic life, the reaction of each part on every other part, the functioning of the system as a whole, all are either lost to or but vaguely understood by a student of economics whose point of departure is the study of institutions as separate entities.

May I add that I see no reason why an economist working in the field of quantitative economics such as business cycles, or in the study of some institution such as coal, banking, labor organization, or the trust movement, must be classified as an institutionalist. The work of such staunch neo-classicists as Taussig in the tariff, Viner in international trade, Seager in labor and the trust movement, and Seligman in taxation certainly does not automatically label

them institutionalists. After all, there are only two ways of approaching the study of economic life, the horizontal and the vertical. The horizontal considers a cross-section of economic life at a point of time and is commonly spoken of as static. The vertical considers historic growth and is usually characterized as dynamic. The student making the vertical approach tends to draw his analogies from biology, and thinks of himself frequently as an institutionalist. The student making the horizontal approach draws his analogy from the science of physics. The general field of economics has grown to such huge proportions that each economist must specialize in but one small phase for purposes of research, and there is room for all points of view without abandoning the product of the best economic thought built up as a result of a hundred years of brilliant work.

R. T. ELY.—Professor Homan has spoken frankly and bluntly and I am going to follow his example without which I might not have the courage to say what I think. The first reaction that I get is sheer ignorance. I had the same reaction a year ago at Cleveland when laissez faire was discussed and the ideas of a generation ago were brought forward as something new. When I speak about ignorance, I mean ignorance of the history of economic thought and especially of American economic thought.

Institutional economics began in this country in 1885. Read the "Statement of Principles" by the founders of the American Economic Association as given in Volume I of our publications. I do not know where you will find a better statement of those principles which characterize institutional economics than you find in this first volume.

At this session and previously we have heard a good deal about the following concepts as characterizing institutional economics: relativity, economic evolution, property, contract, custom, and competition. All these ideas were emphasized by the founders of the American Economic Association and are clearly expressed in our early writings way back in 1885 and in the following years.

Much has been made of the method to be followed in economics and induction and deduction have been discussed. So far as I have heard, there is nothing new in this discussion. I do not mean that what has been said is not both correct and worth while, but I do mean that similar discussions took place in the eighties, and it seems to me the discussions at that time were quite as thorough and quite as far-reaching as the discussions which we have heard.

I think it would be well for a good many who are presenting institutional economics as something new to read Professor Henry C. Adams' monograph on the *Relation of the State to Industrial Action*. This was published, if I recall correctly, in Volume I of the publications of the American Economic Association. In this we find ideas of relativity and of social control and a good deal that suggests the fine work that Professor John M. Clark has been doing in recent years.

As a matter of fact, in my Seminar some three years ago we took up the works of Professor John M. Clark, centering our discussions about them. I did

not feel that we were getting into any new kind of economics when we were studying John M. Clark.

Read also the early monograph of Dr. E. J. James on the gas industry. This, likewise, was published by the American Economic Association in Volume I. I think this monograph of James' belongs to institutional economics.

Turn to the writings of Professor Carl Knies of the University of Heidelberg, one of the ablest of German economists. Several American economists studied under him and were influenced by him. He was my professor and, before I went to Germany, I recall that Professor J. B. Clark studied under Knies and the influence of Knies upon Clark was marked, as is brought out especially by the earlier writings of Clark. In the writings of Knies we find an illuminating discussion, I may say indeed a profound discussion, of fundamental institutions in economic society. I have particularly in mind the discussion of property given by Knies as an institution undergoing continuous evolution and influencing thereby the distribution of wealth.

We have listened to some discussion of credit and the significance of credit in institutional economics. I think it will be generally conceded by all careful students of economic thought that Carl Knies' work on *Credit and Money* is, even today, outstanding. This book to be sure has not been translated into English and probably is not so familiar to all my younger friends as it should be.

Something has been said about the significance of corporations and it has been implied that the recognition of this significance characterizes institutional economics. The significance of corporations and their influence on production and distribution were discussed by the German economists fifty years and more ago. I would like to refer you to the monograph published by Professor Knies on the *Telegraph* and, if I recall correctly, published in 1852. That book is worth reading today and should live long in the field of institutional economics.

The significance of custom has been referred to this morning, but surely all those who were trained in the German historical school should understand the significance of custom. Schmoller dealt with custom long ago and so far as I know in many respects the writings of Schmoller on custom have not been surpassed up to the present time.

Professor John R. Commons is regarded and correctly regarded as an outstanding institutional economist. But Commons was an institutional economist way back in the nineties. Read his book on the *Distribution of Wealth* and his treatment of property as a bundle of rights—an expression that has been used in this session.

I do not want to disparage Veblen who has had a remarkable influence upon economic thought. I cannot regard him as founder of institutional economics in this country because in my judgment institutional economics as something distinctive goes back in this country to 1885. So far as Commons is concerned, I have the opinion that perhaps he would have been a better institutional economist if Veblen had never lived. This may seem harsh, but all I mean is that I am inclined to think that Veblen has pushed Commons to some extremes

which impair the value of his work. Commons and Veblen both were students of mine. I am not aware that I ever had much influence upon Veblen who was with me but a short time. I am sure that I did have influence upon Commons, however, and he has been very generous in acknowledging this.

So far as I am concerned, I want to say that I am an institutional economist or I am nothing. Consider the subjects upon which I have been working for years: property, contract, custom, and competition. I have already published two volumes on *Property and Contract*, but have not published what I have written on custom and competition. I have both in manuscript form, but other things have necessarily absorbed my time and strength so that I have not as yet been able to bring these manuscripts up to the point where I have felt like publishing them. I hope, however, that I shall be able to go on with the work in these lines and publish what I have. I may add that I have paid particular attention to one kind of property; namely, landed property; and have published some things on that subject. All these topics, it seems to me, clearly belong in the field of institutional economics. They are fundamental; they are relative—constantly changing, constantly influencing our economic thought and practice, and making both what they are.

ELASTICITY OF DEMAND AS A USEFUL MARKETING CONCEPT

EDMUND D. McGARRY, *Chairman*

As strictly defined by economists, the phrase "elasticity of demand" means the relative flexibility in the amounts of goods which would be taken from the market at various prices at a given time. If we restrict the term elasticity to a given time, it will be seen that only one point on the demand curve can be statistically determined and that is the point determined by the price and the amount of goods actually taken by those demanding it. All other points on a demand curve are assumed and must be mere conjectures. If, however, we attempt to build up a curve by taking different points of time, we know that the resulting curve may not only be shifted on the diagram but that its shape and direction will probably be changed. In spite of the phrase "other things being equal," we know that in the practical marketing world other things do not remain equal. Our problem in this meeting is not so much to give further refinements to the orthodox concept of elasticity, as to discover what these other things are, and what their influence is upon elasticity of demand.

How many more units of a goods can be sold if the price is lowered by a certain amount? Will this relationship between price and quantity demanded remain constant during a rising or a falling market? What are the elements which determine the quantities which will be sold at various prices? Can these elements be weighed and the demand be forecasted? Can the relationship between price and demand be controlled to any extent by advertising? It is the answers to these and like questions which will determine whether or not the concept of elasticity of demand can be of use to the marketer of goods.

Our conclusion is a simple one. The economist's concept of elasticity of demand is useful to the marketer only as an aid in asking important questions. A strict application of the concept, in the sense of building demand schedules of precise application, is beyond the realm of practicality. An exact answer concerning elasticity is not available. The chief problem is to find data on which to make an intelligent answer to the questions asked. The pricing problem is one of the most complicated and difficult of all problems in marketing. Its correct answer is of the utmost importance in the conduct of a business. Its answer lies only in a judgment to be derived from imperfect data. What these data are has been suggested in part in the discussion which we have given.

NEIL H. BORDEN.—My paper is limited to a consideration of the application of the concept of the elasticity of demand to the marketing of consumers' goods, particularly those which have undergone a manufacturing process. I am accepting the definition of the orthodox economists, taking Marshall as the leading spokesman: "Elasticity or responsiveness of demand is great or small as the amount demanded increases much or little for a given fall in price."

The question appears almost simple and naïve when we state it as follows: Of what practical use might it be to the manufacturer or merchant of con-

sumers' goods to know the degree of responsiveness in demand for his type of product to changes in price?

If the answer to the question of responsiveness of demand to price changes were readily available, the conduct of businesses would be considerably simplified. Volume and prices provide basic data in planning the conduct of any business. To the extent that supply is under the control of a particular company, i.e., to the extent that monopoly holds, to that extent the elasticity concept has direct bearing on the company's pricing policy. The more competitive a business and the less control it exercises over market supply, the less, ordinarily, does the elasticity of demand enter directly into its pricing determinations, although ultimately the company may be affected very materially by the degree of responsiveness of aggregate demand to price changes.

For the monopolist or virtual monopolist, the question of responsiveness of demand to price is of greatest importance because the control of price and supply lies largely in his own hands, and the size of his profit depends on a proper determination of prices. For our electric light companies and other utilities the elasticity of demand has a direct bearing in determining prices. In this field the concept is also of value to the student in attempting to appraise the social effect of the application of monopoly prices.

Looking to fields other than public utilities, we find the elasticity of demand a matter of direct importance in setting prices among companies which, through control of materials or through patents, enjoy a greater or less degree of monopoly for certain products. I refer especially to products for which satisfactory substitutes are not readily available. The General Electric Company with its control of tungsten lamps, the earlier experience of the Eastman Kodak Company with its Kodak films, the Ethyl Gasoline Corporation with Ethyl gas, are examples. To these companies an answer to the question of responsiveness of demand to price changes is of first importance. The determination of price rests directly with the individual firms. Failure to price correctly may mean a great difference in profits.

We find some types of products protected by a patent or a secret process which gives to them a limited monopoly. Articles of just the same kind are not produced by others, yet there are numerous substitute articles on the market filling the same need of consumers. Examples of such products are found in Beetleware, in the Telechron clock, or in the Gillette razor previous to the expiration of its patents. In such situations a company, because of its patented or secret process, is free from direct competition; it is free to set its prices as it will. The company must, however, recognize that at any time the demand for its product is to a large extent governed by the relation of its prices to those of substitute products.

The manufacturer of an individualized branded article, attempting to build a limited monopoly and to keep as far as possible outside the realm of direct price competition, must, in his pricing policy, take account of the responsiveness of demand to different prices. Although he has the question of responsiveness before him, unfortunately he does not have the answer.

In such instances he can only guess how elastic demand actually is. Price changes for such products are seldom made by the manufacturer; accord-

ingly, little experience on which to base judgments of responsiveness is provided. Moreover, although a high degree of brand specification may be attained, the extent of monopoly control is limited by the fact that substitute or alternative products are available and their prices and their desirability among consumers—as determined by their ability to give satisfaction and by the amount and effectiveness of their advertising—have a more or less direct influence on the demand schedules of the product in question. Accordingly, although such a firm may be free in setting its own price, it may defeat its own ends if it fails to consider constantly the position of substitute articles.

What I have just said with regard to the pricing of highly individualized branded articles applies with greater or less force to all branded articles. The purpose of branding is to individualize products and, in so far as possible, to remove them from direct competition. Each may be considered as a product of separate quality with its own theoretical demand schedule. But such a statement means little when we recognize that the demand schedule is determined to considerable extent by the status of substitute products or brands. When substitutes are numerous and satisfactory in meeting consumers' needs, the individual manufacturer virtually loses control over the pricing of his product. The prices of substitutes may go far in dictating his prices.

Finally, we reach the situation where brand and supposed differentiation of quality between the output of manufacturers means so little that different brands are looked upon by the consumer as practically the same product. The manufacturer in this situation is essentially in the same position as the manufacturer who sells a product unbranded, in so far as any direct bearing of the elasticity of demand upon his own pricing activities is concerned. To such a manufacturer, pricing is a matter of attack or defense, a jockeying which is determined by forces beyond his control. He sells only a small portion of the total supply. Price changes put into effect are dictated by considerations other than the total market demand that might be expected to result from particular prices. He is merely one seller in the market competing with other sellers, and from the combined activities of all, a market price results.

Not infrequently we find a manufacturer, even in a highly competitive position, on the basis of his judgment of responsiveness of demand, taking the initiative in materially lowering prices. He does so in expectation of tapping new strata of demand theretofore untouched. Such a policy was adopted apparently by Mr. Ford in the low-price automobile field.

In industries where overcapacity has been built up, manufacturers and investors have failed to learn what probable demand schedules were and to be guided thereby in building factories to supply demand. We must recognize the desirability from an economic standpoint of reasonable estimates of probable demand for different types of products to guide in the extension of productive capacity. The elasticity concept is involved in all such estimates.

Let us consider briefly the value of the concept to the retailer. Ordinarily the price changes of the retailer are not set with the elasticity of demand in mind. Among other considerations, his prices may be guided by wholesale prices, by customary retail prices, by established retail price lines, by what he thinks he can get from his customers for articles that are not subject to

direct comparisons, by special prices to attract immediate patronage, or by reference to what competitors are charging. He does not ordinarily make changes in price with thought of increasing or decreasing the total demand in his market, but rather with regard to his competitive position in the market as a seller.

Certain instances are found in which the retailer does call into use the concept of elasticity. Either he or his whole market may suffer temporarily from an oversupply of a product, or large retailers sometimes buy large lots of distress merchandise for quick sale. This applies particularly to articles subject to obsolescence because of style or design. Another example is found in some of the large variety chains, such as Woolworth, which have pioneered in selling merchandise at new low prices, acting in part on the elasticity of demand. They have apparently aimed not merely at getting an advantage in the competitive price market, but have counted upon opening up new strata of demand with such prices.

Up to this point, I have endeavored to show various situations in which the elasticity of demand is directly or indirectly useful to the individual business firm. In every case, however, I have noted that all that the concept does for the business man is to raise the question of responsiveness of demand to price changes. It is a guide to thought and no more. No knowledge is given. No formula is provided. The real task is to secure data on which to formulate an answer to the questions concerning responsiveness. Our knowledge of demand curves for consumers' goods is sketchy and inaccurate. Construction of the economist's demand schedule for any consumers' goods, to the point where it is of use to the manufacturer facing an exacting pricing problem, is beyond the realm of practicality. We have noted a few of the more outstanding difficulties in constructing a demand schedule. Marshall has given a pretty complete list of the complicating factors, but our limited space does not allow us to amplify what he has given.

ROLAND S. VAILE.—The value of an industrial installation is a derived value. The installation is made in the hope that it will return an income. Rational buying motives and a fairly long-time point of view dominate the situation.

Because this is true, one of three situations will generally control the sales of industrial installations other than those for replacement as a result of depreciation: (a) a larger realized demand for the consumer goods as a result of a general reduction in its price; (b) a larger realized demand for the consumer goods as a result of a change in the demand schedule for it; (c) an opportunity to lower an individual firm's cost of production of the consumer goods relative to that of competitors, thus permitting either a larger profit per unit output, or a larger percentage of total consumer patronage.

The first of these situations is the result of elasticity of demand in the consumer market. Its reflection into the producer's market will depend upon the reason for the lowered consumer price. If that results from enlivened competition or lowered costs in the marketing processes, there will be an actual change in the demand schedule for producer's goods; that is, more

machines will be sold than formerly at the same, or even a higher, price so that the increased quantity of consumer's goods will be forthcoming.

If, on the other hand, the impetus for lowered consumer price comes from manufacturers with unused capacity, in order that the optimum output may be sold, there may be no change at all in the sales of producer's goods. In any case, true elasticity of demand for the producer's goods is not likely to be the controlling factor; that is, a reduction in the price of machines would not increase the realized demand for them.

In the second case, if the industry is not overexpanded, the increase in demand for consumer goods will result in a proportional increase in the existing producer plant. This may temporarily result in a much more than proportional increase in the annual demand for producer's goods without reference to change in price. This is not a matter of elasticity of demand at all, but I shall refer to it again in another connection later. In an expanding industry, the rate of expansion may be governed, of course, by the cost of installations. The amount of such cost has its effect both on anticipated profits and on the ability to finance the undertaking. This is a matter of elasticity, although, as in the next case, usually it is not an important factor in determining the total volume of sales.

In the third case, if the cost of an installation is lowered sufficiently so that the cost of the consumer goods is lowered as a result, then more installations will be made. This is a matter of elasticity. It is comparable in the nature of its effect to any other technological improvement. It is not likely, however, to be of great importance, for the following reasons:

Since 1920 the total return to all capital used in manufacturing, including working capital, has averaged about 25 per cent of the manufacturers' value of manufactured goods. While there are no thoroughly reliable figures available, yet it seems conservative to estimate that the annual cost of capital goods in depreciation and interest does not exceed 10 per cent of the consumer's price. A reduction of 10 per cent in the cost of all construction and installation in a plant would permit only a 1 per cent reduction in the price of consumer goods. And in few cases would the cost of all parts of an installation be reduced simultaneously; so the actual possibilities are much less.

Technological changes are proceeding so rapidly that reductions in cost of manufactured goods can be demonstrated on the grounds of higher output per employee and per square foot of factory. These savings are so convincing that it is not necessary to emphasize strongly the cost of the installation. Of course, since buying is rational at this point, competitive price is important, but general lowering of price throughout the machine tool industry would accomplish little in increased sales.

A much more important element in the demand for industrial installations is found in the real change in demand for consumer goods. I was an innocent bystander last summer in that discussion between Professors Alvin Hansen and Ragnar Frisch¹. In the discussion, Hansen had followed J. M. Clark in saying that as soon as the rate of expansion of realized demand for consumer's

¹ *Jour. Pol. Econ.*, Dec., 1931.

goods commences to fall, the demand for producer's goods should properly fall; that is, the requirements fall. Frisch maintained that this need not be the case, and in his article he shows clearly that under certain conditions it will not be.

I am still of the opinion, however, that under most practical conditions, when the rate of increase in demand for a consumer good commences to fall, it does so abruptly enough so that the total requirements for industrial installations fall. I want, therefore, to examine the conditions under which this will be the case.

The demand for installation equipment is for two purposes: expansion and replacement. Obviously as long as expansion continues, the requirements for replacement will increase, on the assumption that the depreciation rate does not decrease. When the rate of expansion of realized consumer demand decreases the total requirements for installations will fall whenever the new capacity required for expansion is enough below the expansion requirements of the preceding year more than to offset the increase in depreciation.

The total requirement for installations will fall wherever the unit change in realized consumer demand the previous year multiplied by the complement of the rate of depreciation is less than the unit change in the present year. Or, to employ the terms used by Frisch, the total requirements for installations will fall when $(1 - h) \dot{Z}_{t-1} \dot{Z}_t$. In this formula h = the rate of replacement of producer goods, \dot{Z} = the unit change in realized consumer demand, t = the present year, $t - 1$ = the previous year.

To illustrate, we may assume the following figures:

Rate of replacement of machines—10 per cent.

| Year | Realized Consumer Demand | | | Producer Demand | | |
|--------------------|--------------------------|------------|-----------------|-----------------|-----------|-------|
| | Previous year | Amt. Incr. | Total this year | Replacement | Expansion | Total |
| 1 | 100 | 10.0 | 110.0 | 1.0 | 1.0 | 2.0 |
| 2 | 110 | 9.5 | 119.5 | 1.1 | 0.95 | 2.05 |
| or 2 ₁ | 110 | 8.5 | 118.5 | 1.1 | 0.85 | 1.95 |
| or 2 ₁₁ | 110 | 4.0 | 114.0 | 1.1 | 0.4 | 1.50 |

In each of the three second years there is a continuation of increase in realized consumer demand. But in each case the increase is smaller than in the first year. The total producer demand, on the other hand, is strikingly different in the three cases. In the first case it increases slightly, while in the third case it decreases 25 per cent.

This relationship may be stated in other words. Whenever the amount of expansion in realized demand for consumer goods is less one year than the previous year by a percentage greater than the rate of depreciation of producer goods, the total requirements for the latter will fall. Since 5 per cent to 10 per cent is the rate of depreciation on most installations, a fall of anything more than those percentages in the amount of expansion of realized consumer demand would actually reduce requirements for producer goods.

Under business conditions the effect of changing realized demand for consumer goods may be even more striking than indicated. Depreciation gener-

ally is not an absolute thing in practice. When the fall in amount of expansion of realized consumer demand occurs, the manufacturer may maintain his dividend rate temporarily by failing to replace the machines which are completely depreciated on his books. Whether this is wise is beside the point. It does have a definite effect on the demand for consumer goods and it tends to make that demand more fluctuating than otherwise.

The last two points are not matters of elasticity, but it seems to me they must be considered in evaluating the usefulness of the concept of elasticity.

JAMES E. BOYLE.—I shall use the words "elasticity of demand" as synonymous with shift in demand or change in demand. I am departing somewhat from economic usage, which generally ties demand to the price concept. But in the market place, if we are to explain the actual changes in price, we must liberalize our definition of elasticity of demand. Demand shifts may come from price changes or from many other causes, such as changes in income, changes in refrigeration methods, changes in canning or processing methods, changes in transportation, changes in production, changes in methods of food preparation, changes in work habits of the consumers, changes in scientific knowledge of diet and nutrition, and changes in styles. Demand shifts may in turn cause price changes and many other changes.

Bread is considered as a staple food whose demand is assumed to be inelastic. The fact is that the demand for bread is very elastic. The demand for the raw material—the farmers' wheat—is still more elastic, because of the various classes and grades of wheat and the different uses for them. Over long periods of time peoples have shifted from rye to wheat, from barley to wheat, from corn to wheat.

According to the Food Research Institute there has been a 20 per cent decline in bread consumption in the United States since 1904. It occurred in two stages: a steady decline of 11 per cent, 1904-17; a sudden decline in the last half of 1917 amounting to about 10 per cent. The record-breaking crop of 1923, says the Food Research Institute, was able to move into consumption without a serious price drop, due to elasticity of demand. Says this Institute:

The experience of the year indicates that within limits, when the value of wheat in relation to other commodities drops to a distinctly low point, there is considerable elasticity in the demand, both in the exporting and the importing countries. . . . Had it not been for this surprising degree of elasticity of demand, wheat prices and value might have fallen in 1923 and 1924 to much lower levels.

This elasticity is afforded by the ready use of wheat as feed, which was furthered in several countries by relatively high prices for corn and potatoes and by the use of substitution in human diet.²

The International Institute of Agriculture at Rome has published the statistics on shifts in wheat consumption. Our federal government has made but few studies of demand changes. The Department of Commerce in 1930 published one such study, entitled, *Apparent Per Capita Consumption of Principal Foodstuffs in the United States*. The main facts of these studies are given in the tables on the following page.

² *Wheat Studies*, I, 1, 47, December, 1924.

**ANNUAL AVERAGE PER CAPITA CONSUMPTION OF WHEAT, FOR FOOD, FEED, AND
SEED IN TWO FIVE-YEAR PERIODS
(In pounds)**

| Decreases | | | Increases | | |
|---------------|---------|---------|-----------|---------|---------|
| | 1909-14 | 1922-27 | | 1909-14 | 1922-27 |
| Canada | 686 | 414 | Italy | 367 | 403 |
| Belgium | 502 | 398 | Denmark | 246 | 260 |
| France | 493 | 429 | Sweden | 154 | 180 |
| Australia | 394 | 392 | Portugal | 121 | 145 |
| Argentina | 392 | 332 | Norway | 95 | 143 |
| Spain | 359 | 332 | Japan | 31 | 44 |
| Gr. Britain | 359 | 348 | | | |
| New Zealand | 359 | 352 | | | |
| United States | 321 | 293 | | | |
| Switzerland | 312 | 288 | | | |
| Holland | 264 | 258 | | | |
| Germany | 202 | 143 | | | |
| Finland | 121 | 95 | | | |

The first effect of the elasticity of demand in the sense in which we are using this term is to increase the risks and hence the costs of marketing. In the case of farm products we usually have a buyer's market. Substitutes and alternatives are available. In textiles we can turn from wool and silk to cotton and rayon. In food we can choose meats, fowls, fish, eggs, dairy products, or substitutes. For lard we can turn to vegetable fats and oils. So the risks of marketing are increased. There is no formula for "orderly marketing." The "eat more wheat" campaign and similar campaigns may shift consumption from one food to another, but they do not augment the total consumption of food. Much money is foolishly wasted in such advertising campaigns.

Shifts in consumption do occur over long periods of time. They sometimes occur over very short periods of time. A shift in consumption causes a change in production and hence in land utilization.

A population on a meat diet requires more acres than a population on vegetables or plant products. For example, it now requires more than two acres of crops to feed the average American one year, but only one acre to feed the average German, one-half acre to feed the average Chinese, one-fourth acre to feed the average Japanese. Seventy-five per cent of the Ameri-

CHANGES IN PER CAPITA FOOD CONSUMPTION IN POUNDS

| | About 1899 | 1922-27 | Change in pounds | Change in percents |
|---|---------------|---------|---------------------|-----------------------|
| Cereals..... | 350 | 230 | -120 | -34 |
| Meats..... | 142 | 145 | + 3 | + 2 |
| Fats and oils..... | 34 | 44 | + 10 | +30 |
| Sugar..... | 61 | 105 | + 44 | +72 |
| Dairy products, in terms of milk... | 800-900 | 1040 | +150 | +18 |
| Principal fruits, in terms of fresh fruit | 169 | 192 | + 33 | +20 |

can's food is made up of these four categories: flour group, sugar, dairy, and meats.

The chain store selling food products, with its quick turnover, is now our best single barometer of consumer demand. What the consumer does not buy freely the store does not carry. What will sell is displayed, no matter what part of the earth it comes from. Thus the smallest unit of the chain food stores usually carries goods from some thirty-six states and at least twelve foreign countries. These stores increase competition among farmers. They force shifts in production to meet shifts in consumer demand. These shifts in production often take the direction of fewer and better varieties of standard fruits, and more standardization.

But after all, the main effect of the elasticity of demand is to increase the risks in marketing and to add to the "high cost of marketing." Since elasticity of demand cannot be controlled, it will probably be very difficult to cheapen the food marketing process to any appreciable extent, so far as these costs are due to the risks of demand changes.

DONALD R. COWAN.—Contrary to a seemingly common belief, per capita sales of every product show marked differences from area to area, and for some products they vary more than for others. The importance of the various influences upon the rate of consumption may be separated and measured by a partial and multiple correlation, including curvilinear adjustments and subject to its limitations. These measurements are of value, not only from a theoretical standpoint, but from that of the marketing organization. Knowing the responsiveness of a given group to price change, the price policy in many cases may be modified so as to bring about the most profitable volume of consumption of a given product.

HUGH E. AGNEW.—Marshall's law as stated by Professor Borden regards a market as being limited to one time and place. Otherwise the exceptions would be so numerous as to invalidate its tenets. The marketing man on the other hand looks at a market as being continuous for a period of time. When he thinks of the rug market he envisions the people who buy rugs each year, rather than a mart where this commodity is bought and sold at auction.

Obviously for a long-time market the elasticity of demand is very low in a vast number of the staples which constitute the chief items in food and other supplies. For example in 1929 with the prosperity of the country extremely high the sale of sugar was only slightly above normal, although the price was the lowest in history. The season's consumption was rigidly inelastic. The repeated failures of free newspapers has demonstrated that reducing prices, even to the vanishing point, does not stimulate demand for this commodity. It is also evident that reduced rates in street cars would not increase the number of passengers to a noticeable extent.

Even with such items as Professor Borden has enumerated—electric lights, Gillette razors, telephones—there are frequently, if not generally, other conditions which govern the making of price rather than strict demand. The inventor of the Gillette razor wanted to sell it for a dollar but the advertising man with whom he consulted clearly demonstrated to him that it would cost at least a dollar to teach each possible customer to use his newly fashioned

razor. Furthermore, if only a dollar were invested in it a little dissatisfaction would result in the loss of the customer's good will and turn his influence against future sales. If he had invested even as much as five dollars in the razor he would be willing to experiment to a greater extent in order to learn if he could adapt it to his needs. The success of the higher price is commonly known. Would a cut of 10 per cent or 15 per cent in the price of electric current or in telephone service increase consumption in the market represented by householders?

If a manufacturer can anticipate his market in such a way as to cut prices drastically (in the words of the street, to take his loss quickly), there is little doubt that the market for a large number of items may prove sufficiently elastic to absorb greater quantities of merchandise. But on the other hand if the reduction in price comes gradually and more or less continuously little or no elasticity is apparent, as it is well known that people are reluctant to buy in a falling market. It is only when there is evidence that a market has already turned and prices are advancing that investment is more readily made. This would seem to restrict Marshall's law to a very narrow field, especially if applied to a large number of items and to a considerable length of time.

JOHN F. PYLE.—These papers on the subject of the elasticity of demand as a useful marketing concept illustrate some of the difficulties encountered and the limitations met in an attempt to examine this problem in an objective manner. There are too many variables and unknowns to permit us to arrive at mathematically perfect solutions. The ability to isolate the concept, place it under the microscope, so to speak, and keep it there long enough to secure tangible evidence of its significance is no small accomplishment. We are all aware of the fact that many and, at times, quite extensive changes in the volume of sales are brought about by other factors than changes in prices. This is an important point to keep in mind. It is frequently impossible to apportion, with any great degree of accuracy, the causal force to the various sources. The fact that the demand schedules for certain goods are characterized by abrupt changes in their direction or by "breaks" is useful information for the executive entrusted with the responsibility of pricing the articles of merchandise.

Business men and economists rather generally regard the demand for industrial goods as being relatively inelastic. Many of us, no doubt, know of instances in which a rather substantial reduction in price increased sales of articles of original equipment several hundred per cent, thereby permitting large scale production and lower costs. Professor Vaile's analysis might have been improved somewhat, if he had discussed the subject of elasticity of demand for industrial goods from some such classification as raw materials, equipment, supplies, and whether the goods are bought by producers of consumer goods or by producers of producers' goods, and, further, according to the different stages of the business cycle.

I have some doubts as to whether the demand for industrial goods can be forecast or determined so nicely as Professor Vaile's table indicates. These data might just as logically be interpreted as showing a condition of over-expansion in the first year. Again, the question might be raised as to whether,

in an ideally organized economic system, it should not be the function of the industrial producers to anticipate the changes in demand for consumer goods, whose producers use the machinery of the industrial producers. Such foresight would tend to reduce greatly the menace of overexpansion in production facilities.

WELLS A. SHERMAN.—Professor Boyle has brought out clearly the difference between elasticity of demand for wheat as a concept of the needs or wishes of the individual on one hand, and the readiness of society on the other hand to utilize wheat at unusual prices. He makes it clear that when the price is low enough demand for wheat arises for unusual purposes.

He does not emphasize the point that the total supply may be rather rapidly decreased by grinding for stock feed with relatively little effect on the price. For as soon as the price reaches a point where other grains make cheaper feed stuffs, demand ceases automatically and rather abruptly. If under other conditions stocks become so low that there is not enough wheat to supply the normal and supposedly inelastic demand for human food, the advances in price will be marked and rapid.

It follows that as a practical consideration in marketing, elasticity of demand is one thing when wheat is going rapidly into feed stuffs and an entirely different matter when men are competitive bidders for a supply which is so short that many must go unsatisfied. Or, we may express the same idea by saying that a widely expanding demand for cheap wheat for feeding, which demand is bound to disappear with a slight rise in price, is not so significant either to the grower or speculator as is the resistance which appears when inadequate supplies force men to bid against each other to the point where many must use substitutes to which they would prefer not to resort. At this point demand will tend to remain obstinately constant.

INVESTMENTS OF LIFE INSURANCE COMPANIES

S. S. HUEBNER, *Chairman*

The principal qualification of a chairman is brevity. I shall therefore be very brief in my introductory remarks.

After the lapse of several years, I am glad that insurance has again been favored with a round table conference assignment in the program of the American Economic Association. Insurance is entitled to such a position. It is an integral part of economics, just as much as the customarily recognized divisions of production, exchange, distribution, and consumption. Insurance deals with the important field of risk and risk bearing. Economic values are not only produced, exchanged, distributed, and consumed but they need also to be protected and, if need be, indemnified.

Insurance has many angles to it. But just now the one which seems uppermost in the minds of our people is the investment situation as it affects the standing of our insurance institutions, and particularly life insurance. It was probably with this thought in mind that the program of this round table conference is devoted to the specific topic of "Investments of Life Insurance Companies."

ROBERT RIEGEL.—Of the total assets of life insurance companies over 92 per cent consists of securities, mortgages, and policy loans. Securities rather consistently declined in importance as an investment from 1919 to 1929, while mortgages during the same period were increasing in significance. From 1929 to 1931, these tendencies were reversed, the relative interest in mortgages being reduced and security investments increased, and each now forms about 38 per cent of admitted assets. Policy loans were as high as 15 per cent of the admitted assets in 1914, fell with minor ups and downs to 12 per cent in 1928, and rose to 16 per cent in 1931.

Mortgage loans are commonly segregated into two groups, farm mortgages and other mortgages, the latter consisting mainly of city mortgages. The former have been diminishing since 1924, a tendency which persisted in 1930 and 1931. The explanation seems to lie partly in the movement of population toward the cities, partly in the facilities for farm loans afforded by federal and joint-stock land banks, and partly in the unfortunate agricultural situation. Other mortgages have been increasing since 1924 in importance, but declined in 1930 and 1931, probably because of general real estate conditions.

To say that policy loans reached their peak of importance in 1931 conveys an impression which is an exaggeration. While it is true that in modern times they never before reached 15.9 per cent of the assets, they were as high as 14.9 per cent in 1914 and have never since been lower than 11.9 per cent. Although these loans increased greatly during the depression of 1929-31, they are not primarily a phenomenon of the business disaster. Such a situation of course tends temporarily to increase loans, but fundamentally they are kept up around 12 and 13 per cent by the increased use of life insurance for business purposes, as a medium for saving, and as a reserve for contingen-

cies. On policies of these kinds borrowing is more probable and more defensible than on policies primarily for dependents.

The significance of policy loans as an investment factor arises, not from their proportion to the total assets, but from their possible sudden drain upon life insurance funds at an embarrassing moment. In 1929 it may be estimated that all companies were compelled to provide about \$143,000,000 additional for policy loans during the last ten weeks of the year. This is about 10 per cent more than the cash carried by the companies. The demand for loans, however, may be met out of funds ordinarily currently invested in other ways.

On the experience of twenty-nine companies it may be estimated that investments of all companies totaled \$1,900,000,000 in 1929 and averaged \$38,000,000 a week. This would have provided \$380,000,000 in ten weeks to meet loans of \$200,000,000. In one week ending November 2 the demand was particularly heavy, reaching probably \$34,000,000 for all companies. Policy loans for one or two other weeks in the period just about equaled the average current investments. Thus, while such loans in this period may have entailed some day-to-day problems in providing cash, they did not involve the sacrifice of securities or mortgages at reduced prices, and consequently did not present a serious investment problem for companies in general. This is not to say, however, that they may not create problems for a company other than average.

The depressing effect of the increase in policy loans upon the normal growth of security and mortgage investments in 1929-31 is readily apparent from a comparison of the annual increases in these assets with increasing total assets.

In the security portfolios of life insurance companies, United States' government bonds have been of constantly diminishing importance for the past ten years, with a slight increase in 1931. Their yield, as compared with the yield on fifteen railroad bonds, has been less and less since 1926, which probably explains their decline in importance. The gain in 1931 was probably due to a temporary necessity for increased liquidity of assets. Canadian government bonds have shown little change in recent years.

Municipal bonds fell in importance from 1924 to 1928, rose in 1929, maintained their status in 1930, and rose again slightly in 1931. Railroad bonds have declined steadily in importance since 1924 and continued the decline in 1931. The explanation seems to lie in the diversion of funds to public utilities and industrials, partly because of the increasing financial difficulties of the railroads but also partly because of the increasing stability of public utilities, which provides an additional field for diversification. The explanation is not provided by the comparative yields on railroad and utility bonds.

Investments in public utilities are now double their importance in 1924, as is also true of "other corporations," including industrials. One reason has been referred to above, but in addition, stock investments in these corporations have contributed to the gain. This brings us to the subject of life insurance companies' investments in stock.

Popular discussion of the theory of stock investments by life insurance

companies and the examples of a few companies have led to an exaggerated general conception of the importance of investments by life insurance companies in stocks generally and in common stocks particularly. These companies have always invested a small part of their funds in stock certificates, and the liberalization of the investment laws, such as the permission in New York to buy preferred and guaranteed stocks under restrictions, has caused a large percentage increase in stock investments. Nevertheless such investments are still an insignificant proportion of the total. In September, 1931, all stock investments comprised but 2.8 per cent of the assets of companies representing over 90 per cent of the total assets in the United States. On the same date common stock investments were an insignificant .5 per cent of admitted assets.

Furthermore, a comparison of the stock investments of companies classified as "large," "medium," and "small," according to their assets, shows that while the large companies have increased their stock holdings faster than the medium or small companies, they started from a lower percentage than the latter. Most of the increase, which still brings the total holdings to less than 3 per cent of the assets, was due to the purchase of preferred and guaranteed stocks. As to common stocks, among thirty-four companies operating in New York, large companies' holdings are less than .1 per cent of total assets and medium and small companies' holdings do not exceed 1.5 per cent of assets.

In 1930, out of \$1,400,000,000 invested by twenty-nine large companies, 7.7 per cent consisted of stock investments, and in 1931 to October 31 the percentage in stock for the same companies was 5.6 per cent.

S. H. NERLOVE.—A dogmatic answer to the question of whether life insurance companies should be permitted to buy common stocks is obviously impossible. Many of the factors involved cannot be measured and the answer must to a considerable extent be ultimately based on an opinion of what is going to happen to the security markets. Nevertheless, it is possible to indicate in a general way the direction which the answer should take (1) by analyzing the recent trends in the investment portfolios of life companies and (2) by determining the dangers involved to an insurance company in buying common stocks for its portfolios.

The recent changes in the investment portfolios of life companies indicate that there is a need for a wider field of investment if life companies are to continue rendering their services at as low a price as they have been during the last decade. They are finding that farm mortgages are not meeting their requirements as well as they did and consequently have reduced their holdings of mortgages from approximately 18 per cent of their assets in 1924 to 12 per cent in 1929. This tendency in all probability will continue for some time in view of the agricultural outlook. The companies are also finding that the railroad bond field is narrowing. After the War they continued their policy, which was started in 1906, of investing every year a smaller portion of their assets than they did the year before in these securities. In 1921 they had 25 per cent of their admitted assets in these securities and by 1929 they had reduced the proportion to 18 per cent. This tendency probably will also con-

tinue, in view of the railroad situation. To offset the declining proportion of their assets in these two types of securities, the companies increased their holdings in urban real estate mortgages and in other bonds, particularly public utility bonds. Although urban real estate mortgages, especially where they are a claim not only on the property covered but also upon other assets and income of the property owners, are excellent investments for life companies, they are not likely to be as satisfactory during the coming decade as they have been, mainly because of the prospects for the building industry.

If the life companies begin to accumulate large quantities of high grade public utility or other bonds during the next decade, they are not likely to obtain a large enough yield to warrant their continuing their present rates for their services.

In the last two decades or so the investment position of common stocks has improved considerably. The establishment of large corporations with vast amounts of capital furnished primarily by stockholders has given common stocks a much superior investment position. In addition, the recent drastic stock market price declines have even put equity securities in a stronger position for long-term investment purposes.

Consequently the need of life companies for a wider field of investment securities might well be met by common stocks. The significant danger involved in purchasing common stocks for investment purposes as compared with other securities arises out of their widely fluctuating market values. These fluctuations are important only to those who are forced to sell their securities at some particular time. The average life company has seldom, if ever, been forced to make such sales.

The income of the average life company has outrun its expenditures. Excluding payments on policy loans and forfeiture values, which, of course, reduce the reserve liability, the total annual aggregate expenditures of all life companies have varied between 64 per cent and 72 per cent of total aggregate income between 1904 and 1930. In a representative sample of companies investigated the highest average ratio for the entire period for any one company was 80 per cent and the lowest 58 per cent. And at no time during this period did any company have a ratio of above 95 per cent in any one year. The average life company's premium income alone (total income less investment income) comes very close to covering its expenditures. The annual aggregate total expenditures of all companies have varied from 80 per cent to 101 per cent of the aggregate premium income for the same sixteen year period. In the sample studied, the highest average ratio of any one company for the sixteen year period was 111 per cent and the lowest 76 per cent. During occasional years, however, it was as high as 140 per cent.

Consequently, in view of (1) the investment trends of life companies, (2) the present and probable future investment environment, and (3) the strategic position of life carriers in regard to fluctuating security values, it seems as if the investment and valuation laws should be changed to allow life companies to invest a significant portion of their assets, say 15 per cent, in equity securities.

It should be noted, too, that equity securities have an advantage not yet con-

sidered. They will make it possible for life companies not only to meet dollar obligations but also to some extent to meet "purchasing-power" obligations. Although legally life companies have only dollar obligations to meet and actuarially it is impossible to devise a scheme that will adequately take care of the effects of the fluctuating value of the dollar, life companies, in view of their long-time contracts, should be given the opportunity to reduce to some extent the adverse effects of the downward changes in the value of the dollar.

M. C. RORTY.—The problem of combining adequate safeguards with adequate freedom for the investments of life insurance companies has assumed increasing importance with the growth of admitted assets of companies in the United States from less than \$3,000,000,000 in 1906 to probably well over \$20,000,000,000 at the end of 1931. This last figure represents, roughly, 5 per cent of the national wealth, and perhaps 20 per cent of the senior capital and obligations—bonds, mortgages, preferred stocks, etc.—at present generally available for the investment of the reserves of life insurance companies.

A very rough forecast of the future of life insurance indicates that, in twenty to twenty-five years more, the admitted assets of American companies may approach a limiting figure of 10 per cent of the national wealth, or at that time a total of, say, \$60,000,000,000 to \$75,000,000,000. Barring radical changes in business, industrial, public utility, and real estate financing, the life insurance companies might then find themselves absorbing nearly or quite 40 per cent of all available mortgages and senior securities. Under these circumstances, and with these prospects ahead of them, it is to be expected not only that the companies will from time to time attempt to tap new fields of senior securities, but that the question of legalizing common stock investments will be a recurring one.

If diversified common shares could be counted upon to yield, in the long run, from 9 per cent to 14 per cent on the investment, as some observers have claimed, the presumption might be in favor of granting rather liberal privileges to life insurance companies with respect to investments in common stocks. This presumption might be still stronger if we could accept without question the statistics quoted by Professor Nerlove to show the safety of principal when invested in common shares. However, a very extended study of common stock yields and appreciation indicates that the average yield, combining current dividends with normal gain in market value, is about 7 per cent. Furthermore, this 7 per cent figure does not allow for certain real, even if not directly measurable, elements of risk, in even the very best of common share investments, over and above the corresponding risk in high grade bonds. In addition, these same studies indicate that common share investments made in exceptional periods, such as that of September, 1929, may involve the certainty of heavy losses of principal.

On the whole, the basic argument against common stock investments for life insurance companies is the small increase in the average portfolio yield that could be obtained by permitting, say, 15 per cent of the portfolio to consist of common shares. Such increase, amounting to, perhaps, .2 or .3 per

cent, would not justify any measurable departure from that security which is the first essential of life insurance.

H. D. COREY.—The question of permitting life insurance companies to invest in common stocks hinges to some extent on the relative desirability of stocks versus other types of securities as long-term investments, both from the point of view of safety and of yield. The studies of E. L. Smith and other writers mentioned are inconclusive in that they do not take into consideration developments in the securities markets of the past two years. Generalizations on the basis of such studies are therefore unsafe, and offer at best only a partial foundation for deciding the real issue. In view of the fact, however, that suggested legislation is permissive, rather than mandatory, it seems not unreasonable to decide that such permission might well be granted. Investment departments of the respective companies are in the main well equipped and competent. Motivated by a self-interest which is in no way opposed to the interest of the policy holders they could doubtless be relied upon to determine the needs of their organization, and, if a reasonable amount of stock investments should be found desirable, there appears to be no good economic reason why such securities should not be allowed to occupy a place in their investment portfolios.

It is true, as Professor Nerlove points out, that stock prices will respond more readily to improved conditions than will bond prices. This in itself, however, is hardly an argument for stock investments as this very factor in favor of the stocks makes them equally undesirable when the movement is in the opposite direction, as it has been for the past two years. In all depressed periods stock prices sink more rapidly and to proportionately lower levels than do the prices of comparable bonds. For example the last high for industrial stocks, according to the Dow Jones average, was 381. The low was 73, a decrease of nearly 80 per cent. Percentage decreases of approximately the same amount occurred in the case of railroad and utility stocks. Bonds were of course affected more slowly and were subject to smaller variation.

But the essential problem has not yet been touched. Both papers have been highly informational concerning life insurance investments. The issue has been treated from various angles but the fundamental problem has perhaps been neglected. This whole investment problem might be restated in a slightly different form; namely, will our present economic system provide in the future an adequate long-time investment opportunity for capital funds, not only those of insurance companies but funds from other sources? In other words does the economic order under present conditions provide a means for accumulating the savings of youth for the necessities of old age, for this is the essential function of insurance companies. Possible primitive methods for providing for old age point out the nature of the problem which now confronts any institution having funds to invest. Our primitive man might have stored clothing and food stuffs, or he might have acquired goods which he could have permitted younger men to use for the making of commodities for the use of both. This crude illustration exemplifies precisely what is now done by those who entrust their savings to insurance companies. These savings of course take on the form of railroad locomotives, real estate improvements, and

other capital goods. The question at the present time is whether the near future will furnish sufficient demand for new capital goods to provide for the storing of these savings. Because of the present surplus of capital equipment and the arresting of the growth of population, with its consequent lessened demand for new capital equipment, a significant reduction in possible opportunities for savings funds must inevitably result. This decreasing growth of population, so important to our postulate, is well evidenced by recent census figures. It seems in view of these considerations that it may be desirable to open every reasonably safe channel to permit the investment of accumulated life insurance funds. Common stocks possibly constitute one of these channels.

J. LLOYD MAHONY.—One of the problems which might well be discussed is called to our attention by the increases in policy loans. It is a problem common to all financial institutions today—that of maintaining liquidity, and at the same time of keeping the money which is entrusted to them actively and profitably employed.

Life insurance, savings deposits, and building and loan accounts, in contrast with deposit accounts at commercial banks, are long-term propositions, fundamentally. Accordingly, the institutions which provide such accommodations may reasonably presume that the great bulk of money so deposited will be left with them over an extended period. Broad investment policies may be worked out under which these institutions proceed to put this money into such securities and other commitments as will represent the maximum of safety of principal and a satisfactory yield, without particular regard for the readiness with which such securities might be liquidated. Instead of this strictly long-term aspect, we find that these institutions are all designed so as to allow withdrawals at the depositor's convenience up to the full amount of the book value of the account.

While it is true that life insurance companies have been able to meet all requests for policy loans without any sacrifice selling of permanent investments, it would seem to me that much more definite and systematic plans should be worked out to care for the ever-increasing demands for cash withdrawals. I do feel that these long-term institutions should be protected at every turn from overindulgence of the cash withdrawal privilege on the part of policyholders. I believe that life companies should hold to the idea of a reasonable withdrawal notice and that some plan of limiting the amount which might be paid out either in the form of policy loans or surrender values should be adopted and enforced.

At any rate, Professor Riegel's findings are impressive enough to indicate that in policy loans there lies a problem, which, although it is not now considered to be particularly serious, might well grow into a very complicated one, with further increases. I hesitate to imagine the pandemonium which might reign in our great securities markets should it ever become necessary for life insurance companies to liquidate security holdings in order to raise cash with which to meet demands for it.

But beyond the problem of raising the cash there is the deep-seated one so forcibly indicated by Professor Riegel. The regular investment in securities

and mortgages and other permanent commitments is disturbed by the demands for policy loans. To be so forced to curtail the pursuit of a regular investment policy is indeed not healthful.

All of this resolves itself down into two conclusions. First, in order that policy loans may not be permitted to upset the permanent investment policy of the company, additional safeguards might well be thrown around their granting. Second, a greater percentage of the admitted assets should be carried in cash and other liquid assets to take care of demands for policy loans, thus allowing the permanent investing to go on uninterrupted. This, of course, will reduce the income return from investments somewhat, but such is the price policyholders will pay for the cash withdrawal privilege in their contracts of insurance.

DWIGHT C. ROSE.—I agree with Professor Nerlove that life insurance companies should be permitted to own a limited amount in common stocks with proper restrictions. I wish to emphasize, however, that since the legislatures of our various states have not yet demonstrated an ability to restrict the funds of life companies to safe bonds it is probable that the same type of restrictive legislation applied to stocks would be even less satisfactory. In common stocks we expect a higher mortality ratio of individual issues than we do in bonds. In bonds the loss on one issue cannot be made up by the gain on another, but this is precisely what does happen with common stocks. If, therefore, our legislators aim to apply sound principles of practical conservatism to common stocks, they should change their viewpoint from consideration of individual issues to average results from a diversified group.

Mortgages and bonds carried by life insurance companies have enabled them to present solvent balance sheets each year because these investments have been carried at cost or amortized values. At current market values for their investments practically all life companies are technically insolvent today and have been technically insolvent in a number of years since 1900.

While I recognize the soundness of carrying investments of life companies at arbitrary values because of the peculiar nature of their liabilities, I believe it is illogical to permit carrying bonds and mortgages at arbitrary values while insisting that stocks must be carried at the current market. An investment in a diversified group of industrial common stocks bought in 1901 would at the market values prevailing at the end of 1931 have increased very substantially in value; whereas investment in a diversified group of high grade bonds in 1901 would now be worth considerably less than the purchase price. There has been no period of ten years or more since 1901 when a diversified group of industrial stocks has sold lower at the end of the period than they had at the beginning; whereas there were many periods of ten years when high grade bonds have sold for less at the end than they had at the beginning of such a period.

I suggest that investment of life insurance companies in common stocks should be limited to 25 per cent of the company's total investments, that not more than 5 per cent of the amount so invested in common stocks should be invested in the stock of any one corporation, and that the total investment in any one corporation should not constitute more than 2 per cent of the out-

standing stock of that corporation. These investments should be restricted to corporations organized under the laws of the United States or of one of the several states whose stock is listed and regularly traded in on one or more of the major exchanges of the United States, whose total capitalization is at least \$20,000,000, whose annual net earnings for the seven years preceding purchase thereof shall have averaged at least twice the interest and dividend requirements on all bonds, debentures, and preferred stocks, and where the principal amount of all fixed obligations shall not in the aggregate exceed, in the case of public utility and railroad corporations 60 per cent, and in the case of all other corporations 40 per cent, of the corporation's total capitalization.

I further suggest that life insurance companies might be required to carry all investments in common stocks at 75 per cent of their cost, amortized to 100 per cent of cost gradually each year over a ten-year period. I believe that this would dissuade companies with an inadequate surplus from considering common stocks, would induce investment for yield and long-term results rather than for trading profits, and would provide an immediate cushion of 25 per cent against a decline in stock values. From a psychological standpoint it would be beneficial, since policyholders would recognize that their companies were carrying stocks below cost, and hence would not worry about the financial condition of the company's reserve in times of violent fluctuations.

REAL ESTATE IN THE BUSINESS CYCLE

R. T. ELY, *Chairman*

(In reporting the Round Table on the above topic, it was decided to submit for the *Proceedings* an abstract of the paper presented by Dr. Richard T. Ely, which he entitled "The Depression and the One Hundred and Fifty Year Plan."—EDITOR)

Precisely what do we mean by "depression"? We all know the manifestations of the depression. We have been suffering and suffering keenly from its effects. When I ask, "What do we mean by 'depression'?" I have in mind an analysis of one or two causes of the depression.

Our economic life is one of human relations. This is where we must begin if we are to understand our economic life. More and more economists are coming to treat economics as a science and an art dealing with human relations and with everything else subordinated to these relations. This concept, however, does not fully enter into economics; otherwise, the explanations given of the existing situation would be clearer.

We are prosperous when our relationships function easily and well, and just in proportion as these cease to function easily and smoothly, we become less prosperous. When they are violently disturbed as they are now, we have widespread unemployment and poverty. War is the greatest of all disturbers of normal economic relations, and is one of the most fundamental causes of depression. However, the depressions resulting from war very often come a considerable period after the war.

Let me enlarge a little bit this idea that economics deals with relations among men and should be developed from this point of view, making the material world of natural resources the foundation on which these relations rest. Let us consider some of the topics with which we deal in economics, for example, wages, profits, interest, debts of all kinds. What are they but relations among men? The external world may remain as it is, but it is disturbance in these relations that means poverty. When these relations again move freely and smoothly, then our wealth is increased.

Let us consider the farmer. The soil may remain just as it is, and he may have the finest equipment in the world; nevertheless, disturbed relations bring him poverty. If his farm is mortgaged too heavily, that is a relationship which brings ruin. If he sells on one price level and buys on another price level, it again disturbs relationships. If his produce does not bring a profit, then the merchants with whom he deals may fail and the failure brings ruin to bankers.

Let us approach this from a somewhat different angle. John owns 900 shares of New York Central stock and lives on the income of these shares. The income fails and an infinite train of consequences follows. John may also put up his stock as collateral for a loan. The shares fall to 25 and the loan has more value than the collateral. He must put up more collateral and to do so he has to sell other property. Thus the depression goes on and on.

Some say we have all the land we ever had; we have all our other natural

resources; we have all the buildings that we ever had, etc.; we must, therefore, be as rich as ever. We are not as rich as ever because material things are subordinate to human relations. We are poor, and a great deal poorer, than we were before the collapse that began in 1929.

The fundamental causes of our present distress in the United States have been strangely neglected in current discussions. These discussions concern themselves almost entirely with secondary rather than fundamental causes.

The causes are to be found first of all by researches in the field of land economics. Because we have had no satisfactory land policies for the utilization of land in city and country we have had wild fluctuations in land values. High land values have been followed by extremely low land values. We must seek the fundamental underlying causes of depression in land and what goes with land in its utilization. That is to say, improvements of every sort attached to land. This is the thesis which I present for discussion.

I have just mentioned the strange neglect of land and the movements of land values. Let me give an illustration. In 1929 there appeared a two volume work entitled *Recent Economic Changes in the United States*. It was a report by the committee on recent economic changes of the President's Conference on Unemployment and included the reports of the special staff of the National Bureau of Economic Research. One purpose of the report was by means of analysis of recent economic changes to lay a basis for forecasting our economic future. The men who prepared this report stand high and the two volumes are indispensable to the student of economics. Nevertheless, in these volumes there is scarcely more than references to the land and its utilization. But even now real estate, which simply means land utilized, includes considerably over one-half of the wealth of the United States. Moreover, it is precisely in the uses of land that perhaps the most momentous changes have occurred during the present century. Is it any wonder, then, that these able men were not able to forecast the future? Mr. Walter Lippman, in a remarkable article in the *Red Book* last year criticized severely these volumes because the various writers whose papers made up the volumes did not give us any forecast of coming troubles. At most a slight intimation can be found here and there of what was coming.

I am not sure that you all appreciate the harm that has been done to the economists in this country, either by absence of forecasting or what is still worse, by actual mistaken forecasting. Doubtless Honorable Frank A. Vanderlip, former president of the National City Bank, had in mind the mistakes made by those who have been working on the business cycle and forecasting the future value of securities when at a recent meeting of the Economic Club in New York, he derisively spoke of "economists formerly known as astrologers." An example of mistaken forecasting is given by one of the outstanding economists of the country, who assured us late in 1929 that the price of securities was not too high. On the contrary, he said, we were on a permanently higher price level. It is hard to overestimate the losses due to the situation that has just been briefly described.

We must begin with the land and from land and its uses go on to other economic activities and movements. This is my second thesis. The hard times be-

gan with the farmers late in 1920 and they have steadily become worse for farmers since that time. It is a question of supply and demand. For a long, long time without any satisfactory researches into supply and demand, public policies have encouraged the expansion of agriculture. As a matter of fact during our entire history policies have been such as to encourage expansion of agriculture. In November, 1931, a conference called by the United States Bureau of Agricultural Economics and the Land Grant Colleges was held in Chicago. This conference discussed land utilization and drew up recommendations for a national land policy. The recommendations made by this conference aim to limit agricultural expansion and to bring about a satisfactory relationship between supply and demand. This marks an epoch in our history which has received little attention as a turning point in American economic policies. From the beginning of our history, then, until 1931 America's land policies have been such as to encourage agricultural expansion without limit.

I think that it is safe to say that English economic theory has in no small measure been responsible for this uncontrolled expansion and the plight of the farmer. English theory finds expression in what Malthus regarded as a fundamental law. I refer to what he calls "the law of demanders." He says that agriculture is peculiar because the demanders always so increase as to consume the entire product of agriculture, however large this may be. He went even farther than this and said the growth of population would be so great as to produce a constant pressure upon the means of subsistence and also, in consequence, an increase in land values. This gives us one expression of the English law, the law of rent, as formulated by the English classical school. All the landowner has to do is simply to wait while the value of his land goes up and he reaps an unearned increment. Strange it is that in this period of unearned decrements people still hold to this old theory.

Professor Frank A. Fetter of Princeton University has said that it is unfortunate that in our universities and outside the universities we did not develop American economic theories. Henry Carey and others made a good beginning, but their work was looked upon askance by our academic economists and by those who controlled a large portion of the most influential periodicals. Carey taught that we did not go from better to poorer land; that values depended upon cost of reproduction and that the pressure of population on the means of subsistence became less rather than greater. There is so much chaff with the wheat in Carey's writings that what is most essential in them has been generally overlooked. Land values of the present time are in striking general harmony with the ideas of Carey and his associates rather than with those of English economists. Had we developed the economic theories of Carey and other early American economists into a system of economics which was an outgrowth of American conditions, our land policies might have been better than they have been. We might at least in some measure have escaped the disasters which have resulted from following the theories of the English classical school which they developed under the influences of their own economic life and the conditions following the Napoleonic Wars.

Turning to the World War the policies of government were directed first of all to expansion of agriculture. This is natural enough under the circum-

stances. The area of agricultural land in cultivation underwent enormous expansion. Demand for agricultural products during the War rose enormously and the price at which land was held, sold, and mortgaged rose even more rapidly than was warranted by war prices of agricultural products. The situation of the farmer has constantly grown worse since 1920. It has been a case of increasing supply and decreasing demand. The rate of population growth has become slower and slower and agricultural productivity during the past decade has increased 50 per cent more rapidly than the growth of population. Prices of agricultural products have fallen and farm land values have gone down so rapidly that in very many cases land will not now sell for what was regarded as conservative first mortgages.

This is not a question of money. When I used to live in Madison, Wisconsin, I had a fine little fruit orchard on my small place. The production was so great that I made myself, I fear, a nuisance to my neighbors in trying to give away plums and even apples at times. No manipulation of money, no expansion of credit, will extend the capacities of our stomachs. What folly, then, slogans like "Eat more bread!" when we produce more wheat than could possibly be met by any effective demand!

Satisfactory land policies must be based upon an economic survey of the right uses of land, and when put into effect will mean that upon a basis of classification, land that is adapted specially to forests may be put into forests, etc. Land that is good agricultural land should be used for agriculture. But in determining what is agricultural land we must be governed by prices as the result of forecasts of demand. A great deal of land should lie idle so far as present production is concerned. I cannot go into this in this brief discussion.

As a result of the fall in land value banks in the rural sections of the country have failed by the thousands and in some sections nearly all have become bankrupt. The result of all this is the diminution of purchasing power on the part of the farmers and enormous losses that have resulted to others in their relations with the farmers. Think of what it would mean to the railways of the country, which in their present acute distress are a menace to all of us, if the farmers had been prosperous during the last ten years with the resulting increase in their passenger, but especially freight, revenues.

Let us turn to urban land. Precisely that has been happening in urban land which has happened in the case of the farm land. The same results have followed. We need smaller and smaller areas of land in the cities in proportion to the population. The rate of population growth has been slowing up and although cities have grown at the expense of the rural sections the area of land needed has constantly undergone a relative decrease. New York City offers striking illustrations. When it comes to housing, we have the London Terrace Apartment Building in New York City on 23rd Street between Ninth and Tenth Avenues. It is said that on this one block five thousand people can be housed; whereas, when this was a part of the formerly attractive Chelsea district and single family houses were on this block, it housed four hundred people. In other words, only one-twelfth of the land area per capita is demanded under these conditions.

Turning to the office building, we have an equally striking illustration of

what has been happening in the Empire State Building. It occupies somewhat over 83,000 square feet of land, or a little less than two acres. Probably, under conditions of construction as they existed forty years ago it would have taken ten times that area of land to furnish an equally satisfactory amount of office space. The result of what has happened is that city banks have been failing just as the rural banks began failing several years ago. Distress has spread from class to class.

Putting land to its right uses is taking the first big step in establishing the foundations of continuous, permanent prosperity. It is not by any means all that needs to be done, but it seems to me that this is where we should make a beginning. Doing this, we are putting ourselves in line with the forces already in operation in this country. The state of Michigan some eight or ten years ago began an economic survey of the land of that state not including, however, urban land. In the state of Wisconsin a good beginning has been made by the Agricultural College and other state agencies. Especially, would I commend the researches of Dr. George S. Wehrwein, professor in the Agricultural College at the University of Wisconsin. In New York State, Governor Franklin D. Roosevelt deserves commendation because he is working along the right lines in finding out the proper uses for land and putting land into these uses. The adoption of a constitutional amendment by the state of New York in November of this year makes it possible for the state of New York to take out of agricultural use land that has been submarginal for agriculture and to put it into the production of trees as a regular crop. The decisive vote for this constitutional amendment is a triumph for sound ideas.

Urban land economics has been strangely neglected in our country, but a good beginning has been made in the development of urban land economics. Practice is also following theory, and zoning laws and deed restrictions are steps precisely in the right direction. It is unfortunate that these movements are so extremely slow. If ten years ago they had been vigorously pushed by the United States government, our states and our cities, if we had put into them one-tenth of the energy that we have put into mistaken policies in trying to control the prices of agricultural products directly instead of indirectly by sound land policies, and if we had put into the promotion of land policies half the money and energy that we have put into measures that have not helped at all, we might be much further along at the present time.

In putting land to its right uses, we are also acting in harmony with what has been done elsewhere successfully to increase prosperity; for example, in Ireland and in Germany. Such prosperity as Ireland enjoys is largely a result of her land policies which are, in general, in line with my recommendations. What Stein and Hardenberg did early in the nineteenth century was an outstanding contribution to the prosperity that Prussia enjoyed for a hundred years. Prosperity depends primarily upon proportionality in production. Evolution is continuous and it is bound to advance beyond policies. But we should endeavor to bring our policies as rapidly as possible into harmony with the stage of economic evolution that we reach from time to time.

Recovery from depressions is, first of all, a result of the transfer of labor and capital where they exist in excess of proportionality into new lines of

activity so that they may satisfy economic wants, new and old. Ever since the industrial revolution in England in the latter part of the eighteenth century, we have had periods like the present when there has been disproportionate production. England followed the *laissez faire* policy and the result was chapters in English economic history of great wretchedness which are a disgrace to England. In the course of time, however, an adjustment took place after endless suffering described in many treatises on economic history. It is beyond the power of the individual to make transfers of labor and capital quickly into new fields where new wants are satisfied. If we follow a *laissez faire* policy, transfers are gradually made with endless suffering in a variety of ways. New occupations spring up and give employment to vast numbers. If we study the census reports of occupations, we find how they increase and afford employment. Changes in old economic activities increase employment in the long run and as a general rule. The case of the stage coach and the railways has often been mentioned. Printing took away the occupation of a great many scribes, but has added probably a thousandfold to the number engaged in making books. We come to this old idea of the long run, but we remember that life is only a short run. A great problem, then, is making quickly enough transfers of labor and capital for human beings whose life is only a short run. The only measure that I know that is adequate to meet this situation is the establishment of a peace time army which I have described elsewhere.

I will say just a few words in this paper about the peace time army. We should have a permanent peace time army of, say, 25,000 people and at the head of this army there should be a general economic staff. This peace time army would work systematically in the noncompetitive field doing useful things to satisfy real wants. There is no limit to the things that can be done in the noncompetitive field in improving what we may call the "common wealth," the wealth of us all: reforestation, maintenance of fire lanes in our forests, cleaning up the banks of streams which supply us with water, planting these banks with trees thereby making them beautiful parks of recreation and at the same time producing valuable products. Roadside beautification would employ a great many men and at the present time something is being done in this direction to relieve unemployment.

A great deal may be done in the way of promotion of public health; for example, we have very few convalescent homes. One of the most important things of all is the separation of grade crossings which would prevent the destruction of life and property, a destruction which is now appalling. The railways can, in no possibility, do all that needs to be done. I would take this separation of grade crossings out of the field of private industry and make it a public function. And it is not necessary to give statistics to show that this would take up all the capital and labor that could possibly be devoted to this improvement and would do so for more than a generation.

The peace time army would be so organized that it could be expanded indefinitely. Whenever a depression occurs, this would take care of the immediate situation and in the meantime labor and capital would be finding new occupations. The pay of those in the peace time army apart from the standing army would be somewhat like that of soldiers during the World War, with provi-

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sions for families, etc. The general staff of the peace time army would know the qualifications of those in the army and be ready to assist in the transfer back to industry of the soldiers in the peace time army as adjustments were made by labor and capital. Suppose, for example, there should be a return of prosperity and the United States Steel Company should have need of 10,000 employees of various sorts; they could turn at once to the general staff and workers could be sent to Pittsburgh or Chicago or wherever else they might be needed. This is adequate to meet the situation and would involve less expense and distress than we are now undergoing in keeping alive the unemployed. They must be kept alive, anyway, and we would have a regular, systematic means of doing this at a minimum expense. At the same time along with the relief they would be making an economic return for what they receive.

If we are wise in the use of land for forests, we must make our plans for a period of one hundred and fifty years. I have called my paper "The Depression and the One Hundred and Fifty Year Plan." Is it already clear why I say "The One Hundred and Fifty Year Plan"? And, indeed, Mr. von Bethman Hollweg, son of the old chancellor, told me a few years ago that on his estate of about five thousand acres not far from Berlin, he had a variety of oaks which grow for two hundred and fifty years; in other words, a two hundred and fifty year rotation. He harvests a crop of these oaks once in two hundred and fifty years. There are many other cases where land utilization should be planned out for one hundred and fifty years and even for more than one hundred and fifty years. In the case of the urban uses of land, policies should extend over centuries. It is going to take more than one hundred and fifty years to carry out the plans which were made by George Washington and his associates for the city of Washington.

I have called attention, to be sure very briefly, to five things which I have outlined in the plan to deal with depressions; namely, (1) to relative oversupply of land in city and country; (2) to the inevitably resulting fall in prices; (3) to the great losses of those who have utilized the land under conditions of oversupply; (4) to the resulting diminution in purchasing power of land utilizers both in the city and in the country; (5) to the quickening of the process of transfers of labor and capital from old to new fields and to do so especially by the creation of a peace time army.

This plan could not prevent depressions on account of the fact already mentioned that policies have necessarily lagged behind our economic evolution. The right uses of land will do something to lessen the number of depressions, but especially will it do a great deal to lessen the severity of them when they do come. Moreover, in the peace time army that I have described provision is made whereby it is possible to carry on during periods of depression until, through various readjustments, normal conditions once more prevail.

Dr. Ely's paper was followed by discussions by John R. Riggleman, Professor Ernest M. Fisher, Dr. W. C. Clark, and James S. Taylor.

SESSION ON INVESTMENTS AND NATIONAL POLICY OF THE UNITED STATES IN LATIN AMERICA

PAPER BY MAX WINKLER

College of the City of New York

Almost two generations ago, an Englishman holding bonds of the state of Pennsylvania addressed a letter¹ to the House of Congress at Washington, part of which reads as follows:

Your petitioner lent to the state of Pennsylvania a sum of money for the purpose of some public improvements. The amount, though small, is to him important and is a saving from a life income, made with difficulty and privation. If their refusal to pay (from which a very large number of English families are suffering) had been the result of war, produced by the unjust aggression of powerful enemies; if it had arisen from civil discord; if it had proceeded from an improvident application of means in the first years of self-government; if it were the act of a poor state struggling against the barrenness of nature, every friend of America would have been contented to wait for better times; but the fraud is committed in profound peace, by Pennsylvania, the richest state in the Union, after the wise investment of the borrowed money in roads and canals of which the repudiators are every day reaping the advantage. . . .

Needless to add that in the years which have elapsed since this memorable epistle was written, Pennsylvania has paid her just debts, and history has willingly forgiven the state's youthful sins.

American investors in the obligations of Pennsylvania will hardly incline to recall the state's attitude toward her foreign creditors more than half a century ago. Why then are American investors in the obligations and enterprises of the republics south of the Rio Grande constantly reminded of the past defaults and repudiations by these countries, without being told of the circumstances under which foreign loans were contracted, which, in many instances, were such as to render default inevitable?

Apparently, the American investing public is easily pleased. It is, as a rule, treated to half truths at best. It rarely, if ever, hears the *altera pars*. When gentlemen in the House or the Senate rise in protest against American foreign investments, they point to the dangers incident upon entangling alliances with foreign nations. They refer us to Jefferson, who stated that "we have a perfect horror at everything like connecting ourselves with the politics of Europe," and who summarized the essential principles of our government, including among them "peace, commerce and honest friendship with all nations, entangling alliances with none."

We are, however, not reminded of the fact that, during the War of Independence, our government not only made a military alliance with France, but was prepared and willing to enter into every other European connection which would aid in the struggle. Nor are we reminded of the views expressed by George Washington to the effect that "when our institutions [become] firmly consolidated and working with complete suc-

¹ *Annals of the American Academy of Political and Social Science*, Vol. CXXXVIII (July, 1928), p. 4.

cess, we might safely and perhaps beneficially take part in the consultations held by foreign states for the advantage of the nations."

It appears that our ventures into foreign lands were effected in accordance with the advice handed down by the Father of our Country. In other words, our investments abroad did not commence until our own institutions had become firmly consolidated and were working with complete success.

Latin America appeared a logical field for the placement of American capital. Half a century ago, our total stake in the countries south of the Rio Grande barely exceeded \$50,000,000. At the outbreak of the European war, our investments in Latin America had reached \$1,300,000,000, or almost four times as much as our European investments, which were estimated at \$350,000,000. At the beginning of the current year, American investments in Latin America totaled \$5,705,601,000, or slightly in excess of our stake in Europe.

Has the United States grown poorer as a result of the placement of such relatively huge funds abroad? Has America's standard of living been lowered as a result of our having been transformed from a debtor nation only a decade and a half ago to one of the world's most powerful creditor nations? Is it not within reason to assume that the impressive growth in our commerce with our southern neighbors is directly attributable to our investments in those countries?

Few probably realize that for every increase of \$1,000.00 in our investments in Latin America during the past decade and a half, our commerce with our neighbors increased \$140.49; while our trade with Europe during the period 1913-30 registered a gain of only \$72.67 for every \$1,000.00 increase in America's investments in the old continent.

These figures would seem to demonstrate the underlying causes for America's economic penetration of her southern neighbors. It is obvious that we did not make our investments largely in order to make it possible for our soldiers, our bankers and oil barons to rule Latin America, as stated² by a rather prominent American historian versed in Central and South American affairs.

Although both interest and expedience dictate that Latin America should rank first as an investment field for America's surplus funds, extreme discrimination must be exercised in the granting of credits, and precise stipulations made regarding the purpose to which they shall be put. Lenders who ignore or do not heed sufficiently these cardinal principles, are conferring no benefits upon the borrowers. On the contrary, they are definitely aggravating their difficulties without securing for themselves corresponding compensation, except perhaps the transitory joy which resides in monetary rewards.

² S. G. Inman, *Atlantic Monthly*, July, 1924.

Our experience as a lending power, brief though it is, is replete with instances which clearly demonstrate that many a credit, granted regardless of the manner in which the proceeds were expended, turned into a discredit to ourselves, without in any way benefiting the borrower, except perhaps some unscrupulous public official.

To a considerable part of Latin America, we were still somewhat of a myth as recently as 1906, when Elihu Root told our neighbors, "We wish for no victories but those of peace; for no territory except our own; for no sovereignty except the sovereignty over ourselves."

During and after the war, our friends south of the Rio Grande discovered that the *Norte Americano* was no longer a myth. He consumed large quantities of coffee and sugar and bananas; of tin and nitrate and manganese. He supplied ingenious farming devices and cheap automobiles which did as good service as expensive cars from Europe. But he was not popular because his ways differed from all precedents, and he was suspected of contempt for those whom he arrogantly termed "Latin Americans."

Then was born a wonderful new era—*Aurea prima sata est actas*—an era in which millions of dollars, tens and hundreds of millions, were offered to the governments and industries of the southern republics by the same incomprehensible *Norte Americano*, who, not so many years back, would bicker over ninety days' credit on a hundred dollars' worth of merchandise. In typical American fashion, we aimed at achieving overnight what it has taken our European friends decades to accomplish. It seemed as if we had set as our goal the creation of a record as regards the investment of capital in South and Central America. The desirability of such investments was rarely questioned, the principal object, on many occasions, being the extent of the underwriters' profit.

The consequences of such policies did not concern us. That they did not concern many of the politicians in the borrowing countries should occasion no surprise. These always regard their position as ephemeral. They live for the day. Their philosophy of life is *carpe diem*, enunciated by Horace two thousand years ago. They can live only by yielding to the multiple undertaking of expenditures, proposed by themselves and their temporary adherents, who violate with silent complicity the weak sense of decency, and exchange favors by the misuse of the public treasury. In order to enjoy the present, they cheerfully mortgage the future, and in order to win the favor of the voter, they launch costly and often sterile public works, which exceed the taxable possibilities of the country.

Après moi le deluge, said a King of France who saw a flood coming—which, to use the words of Luzzatti, was a necessary catastrophe as an atonement for all the ignominy which the monarchy had produced. *Après moi le deluge*, said many a South American executive, and the flood they

invoked, occasionally with the aid of North American bankers, came with bankruptcy and default. Realizing that their days were numbered, as has almost invariably been the case of Latin American despots, they appropriated public money without restraint, either of decency or patriotism. When subsidies were requested, they were readily made, and those who furnished the funds rarely cared to inquire into their use.

So long as the golden stream was flowing in, respect and gratitude filled the hearts of Argentineans and Brazilians, Chileans and Peruvians, Bolivians and Colombians and Uruguayans, for the manifestation of good will and confidence on the part of the United States. Thousands of young men from those countries came here to learn our language and commercial methods. Our engineers and business experts journeyed south by invitation. Presidents of the United States exchanged visits with the presidents of those republics. Good relations and mutual confidence became firmly established.

America's leadership in the field of international finance was undisputed. Americanization and American methods were the goal of every nation across the Atlantic and south of the Rio Grande. The United States abounded in experts in practically every field of endeavor and was at all times ready to "lend" those American wizards of economics and finance to whomever was anxious to borrow them. Of course, each time an expert was dispatched to a foreign land, the American investing public began to be prepared for a loan to that country. The expert's advice was invariably followed or accompanied by the flotation of issues on behalf of the nations whom he had been called upon to advise.

Such state of blissfulness obtained as long as American bankers were willing to underwrite foreign issues or, rather, as long as the American investing public was willing to absorb them.

Then, suddenly and without warning, the fountain of credit dried up. The New York foreign bond market, expensively organized through years of educational campaigns, collapsed. Underwriting houses, investment corporations, and foreign bond brokers, abandoned their bond departments, in order to devote all of their time to a stock market orgy which lasted seventeen months.

Latin America was bewildered by this changed situation, which New York bankers were finding difficult to explain. Relations were still good, but there was an undercurrent of resentment, particularly on the part of governments with unfinished roads and public works for which funds were actually promised, subject to market conditions. It cannot be said that there is good understanding when one of the parties does not understand.

Unemployment set in. Demand for native products decreased. Governments were found wanting because they could no longer keep promises. Discontent grew, and so did the desire to change conditions through

revolutions—a method which, on the whole, had lain dormant for decades. It was discovered, however, that a mere change in government cannot alter appreciably the price of copper and tin, of silver and nitrate, of coffee and sugar. The governmental treasuries were empty; trade was falling; reserve ratios dwindled; and the inevitable happened—suspension of payment on contractual obligations.

The age-old theory was revised: South and Central American countries have little, if any, regard for the rights and privileges of creditors. Nothing can be further from the truth. Integrity and honesty are not the sole property of certain nations. Our southern neighbors are inherently as honest as our Anglo-Saxon cousins, or our Far Eastern friends. The fault is at least as much the lender's as it is the borrower's.

To begin with, we almost went out of our way to finance Latin American projects. No loan was turned down so long as we felt that it would be absorbed by the American investing public. It is indeed amazing to find that, in spite of the unparalleled demand for foreign issues during the period 1924-29, not a single loan was sold to the American public on behalf of a non-existent foreign government. Any one familiar with the state of our bond market at that time knows how easy it would have been to place successfully even bonds of such category.

The result was that nations were permitted to accumulate a debt far beyond their capacity to meet. Many of our bankers, relatively new in the field, had cultivated a peculiar idea about Latin America. They were inclined to look upon financial transactions with most of our neighbors as hazardous and, consequently, decided to have the supposed risk offset by the onerous terms imposed. In this connection, it may be of interest to quote from a statement made by one of South America's most distinguished statesmen, Doctor Augustin Edwards of Santiago, anent the sale to an American group of a Bolivian loan. "Loans," said Doctor Edwards, "are made to countries in which the financial and economic condition and the governments offer reasonable guarantee of repayment. Capitalists are not obliged to extend credit to those who do not offer such guarantees. But, beyond this, it is not safe to go." American bankers did go beyond this and it has proved distinctly unsafe, not so much for them, as for those of the American investing public who had been prevailed upon to purchase those bonds.

The default on the part of South American republics, regardless of who may be responsible, has doubtless dealt a severe blow to the credit standing of these countries in the financial markets of the world. Fear on the part of investors, due largely to paucity of information, that countries which have not as yet defaulted might emulate their neighbors, has aggravated an already complicated problem. It is for these and similar reasons that we often encounter the most unusual spectacle of

seeing South American issues, the service on which continues to be met, sell at prices which are not appreciably above the coupons which they bear. We witness third lien bonds selling substantially in excess of first lien issues; and bonds with higher interest rates selling considerably below issues with lower rates, *ceteris paribus*.

Such is the irretrievable penalty a nation is obliged to pay for the collapse of its credit. And, since credit is one of the underlying factors in a nation's commerce, the trade of the country in question with its neighbors also suffers considerably.

Even in 1930, which was admittedly one of the most trying years in the economic history of Latin America, our total commerce with our southern neighbors showed a gain over the 1913 figures of more than 73 per cent, and compares with a gain in our own total trade over the pre-war figure of about 63.5 per cent.

Careful and unprejudiced analysis of our relations with our southern neighbors reveals that the United States banker was not always extending aid for purely selfish reasons, or because he was anxious to further an imperialistic scheme evolved to subjugate all of Latin America.

The United States banker and business man are fully cognizant of the significance which Latin America, with its 110,000,000 people, has for our own country. Although, culturally, Europe has meant and might possibly continue to mean more to us, commercially, Latin America has assumed greater prominence.

Within the past fifty years, our trade with Latin America has increased almost seven times; whereas our trade with Europe has, in the same period, advanced less than three and one-half times. Moreover, our commerce with Latin America has shown an even more impressive growth than the total trade of the United States, which increased slightly more than six times during the period 1880-1930.

Many are the disappointments to which our bankers for, and investors in, Latin American countries have been subjected, and even more numerous are the disappointments of American holders of Latin American bonds. But large, too, is the number of mistakes which have characterized in the past our foreign loan policy in general, and our Latin American loan policy in particular, and for which the irretrievable penalty is now being exacted in the form of defaults and suspensions of payment.

Nevertheless, the importance of Latin America to the United States as a future market for our manufactured goods, cannot be disputed. Why do we not, therefore, concentrate our efforts to the end that our commerce with Latin America, amounting to \$1,600,000,000 yearly, be at least maintained, and that it be not lost to us at a time when we most need it?

With approximately \$6,000,000,000 of American capital invested in

Latin American securities and enterprises, it is no longer a question whether such investments should or should not have been made. Such question is by \$6,000,000,000 too late. We are in Latin America to that extent and it is incumbent upon us, or those of us who are charged with the guidance of the economic policies of the American people, to see to it that adequate protection is given to what has already been staked in Latin

U. S. INVESTMENTS IN LATIN AMERICA¹
(As of January 1, 1931)

| | Direct investments | Portfolio investments* | Total investments |
|--|-----------------------|---------------------------|----------------------|
| Argentina..... | \$ 353,369,000 | \$ 517,800,800 | \$ 871,169,800 |
| Bolivia..... | 61,619,000 | 61,104,000 | 122,723,000 |
| Brazil..... | 222,498,000 | 401,424,000 | 623,922,000 |
| Chile..... | 295,735,000 | 311,367,000 | 607,102,800 |
| Colombia..... | 123,994,000 | 184,402,800 | 308,396,800 |
| Ecuador..... | 11,777,000 | 10,726,000 | 22,503,000 |
| Paraguay..... | 12,615,000 | 150,000 | 12,765,000 |
| Peru..... | 126,530,250 | 102,881,000 | 229,411,250 |
| Uruguay..... | 27,904,000 | 81,977,300 | 109,881,300 |
| Venezuela..... | 240,808,850 | ..... | 240,808,850 |
| Total South America..... | \$1,476,850,900 | \$1,671,832,900 | \$3,148,683,800 |
| Costa Rica..... | \$ 22,166,000 | \$ 9,400,000 | \$ 31,566,000 |
| Guatemala..... | 69,979,000 | 4,775,000 | 74,754,000 |
| Honduras..... | 71,485,000 | 1,250,000 | 72,735,000 |
| Nicaragua..... | 13,002,000 | 1,646,700 | 14,648,700 |
| Salvador..... | 29,466,000 | 14,530,300 | 43,996,300 |
| Panama..... | 28,584,000 | 19,866,000 | 48,450,000 |
| Cuba..... | 1,014,444,500 | 206,320,500 | 1,220,765,000 |
| Haiti..... | 14,191,000 | 16,015,000 | 30,206,000 |
| Mexico..... | 725,043,900 | 145,796,300 | 870,840,200 |
| Dominican Republic..... | 69,322,000 | 19,684,000 | 89,006,000 |
| Miscellaneous Latin Amer- ica†..... | 60,000,000 | ..... | 60,000,000 |
| Total..... | \$2,117,683,400 | \$ 439,283,800 | \$2,556,967,200 |
| GRAND TOTAL..... | \$3,594,534,300 | \$2,111,116,700 | \$5,705,651,000 |

* Includes internal bonds.

† Includes the Guianas, Jamaica, and other West Indies.

¹ The estimates of American investments in Latin America have been prepared by the writer.

The reasons for the discrepancy between these figures and those presented by the Department of Commerce are presented in a special study on "A New Estimate of American Investments Abroad" prepared by the Department. These reasons include, among others, the elimination by the Department of American investments in the obligations of the Mexican Government, its various political subdivisions, as well as in Mexican railways, advancing as a reason for the elimination the prevailing low quotation of Mexican securities and the resultant difficulty to determine their true value.

It is obviously difficult to subscribe unqualifiedly to such arguments. After all, the investment of American capital cannot be determined on the basis of the liquidating value at the time the computation is made, but must be based upon the actual amount invested in any given situation. If market values are chosen, it will become necessary to revise American capital investments abroad every time the quotation of the various foreign securities held in this country will undergo changes.

America, and that proper care is exercised in whatever investments we may make in the future.

This could best be accomplished through an unbiased and impartial agency, whose activities would be directed by men of experience in international affairs and of sufficiently high standing to command the respect of the community. And, while it is true that such an agency might from time to time find itself opposed to interests anxious to finance Latin American or foreign projects in general, largely because of the profits

UNITED STATES—LATIN AMERICA TRADE AND INVESTMENTS*

| | 1880 1913 1930 (In millions of dollars) | | | Increase Over 1st Over Period 1913 | |
|----------------------------------|--|-------|--------|--|--------------|
| | 1880 | 1913 | 1930 | Over 1st Period | Over 1913 |
| Total U. S. exports..... | 677 | 2,484 | 3,843 | 467.65 | 54.71 |
| Exports to Europe..... | 562 | 1,500 | 1,838 | 227.04 | 22.53 |
| Idem, in % of total..... | 83.01 | 60.38 | 47.82 | ..... | ..... |
| Exports to Latin America..... | 58 | 361 | 680 | 1,072.41 | 86.70 |
| Idem, in % of total..... | 8.57 | 14.53 | 17.69 | ..... | ..... |
| Total U. S. imports..... | 493 | 1,739 | 3,061 | 520.89 | 76.02 |
| Imports from Europe..... | 248 | 865 | 909 | 266.53 | 4.04 |
| Idem, in % of total..... | 50.30 | 49.75 | 29.70 | ..... | ..... |
| Imports from Latin America.... | 155 | 481 | 781 | 403.87 | 62.37 |
| Idem, in % of total..... | 31.44 | 27.66 | 25.51 | ..... | ..... |
| Total U. S. trade..... | 1,170 | 4,223 | 6,904 | 490.08 | 63.48 |
| Idem, with Europe..... | 810 | 2,365 | 2,747 | 239.13 | 16.15 |
| Idem, in % of total..... | 69.23 | 56.00 | 39.79 | ..... | ..... |
| Idem, with Latin America..... | 213 | 842 | 1,461 | 585.91 | 73.51 |
| Idem, in % of total..... | 18.21 | 19.94 | 21.16 | ..... | ..... |
| Total U. S. investments abroad.. | 200 | 2,625 | 17,528 | 8,664.00 | 627.50 |
| Investments in Europe..... | 120 | 350 | 5,607 | 4,572.50 | 1,502.00 |
| Idem, in % of total..... | 60.00 | 13.33 | 31.98 | ..... | ..... |
| Investments in Latin America... | 50 | 1,300 | 5,706 | 11,312.00 | 338.92 |
| Idem, in % of total..... | 25.00 | 49.52 | 32.55 | ..... | ..... |

* Trade figures represent annual average for period preceding 1880.

accruing from such undertaking, it could to advantage adopt as its slogan the Latin words, *Oderint, dum mutant* (let them dislike us, as long as they respect us).

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To confine discussion within workable limits, investments of the United States in Latin America will merely be summarized, and policies of the United States and its citizens, so far as they impinge on those investments, will receive principal attention.¹

There are, of course, no exact computations of American investments in Latin America. All so-called statistics are estimates. Probably as accurate a guess as may be offered is that slightly less than six billion dollars of American capital have gone to Latin America. Great Britain has furnished approximately an equal amount. These two countries are believed to account for about three-fourths of total foreign capital in Latin America.

Imperialism for its own sake and dollar diplomacy in defense of the Panama Canal have frequently been put forward as motives for the rapid growth of financial power by the United States in Latin America. Large amounts of capital do not go into a given country because a certain secretary of state has aspirations toward greater political influence in that country nor do American dollars concern themselves with strategic considerations involved in the Panama Canal. However, when treaties exist, as between the United States and Cuba, the flow of capital is influenced, and more American capital was undoubtedly embarked in Cuba than if no treaty relationship had been in effect.

American investments take two principal forms: (a) loans to central, provincial, and municipal governments, which have amounted to about \$2,500,000,000; and (b) direct investments in agricultural, mining, manufacturing, and commercial enterprises, in which \$3,500,000,000 has Latin American policies. In sequence after Mexico and Cuba, came Argentina, Brazil, Chile, Colombia, Venezuela, Peru, and Bolivia, in that order, as important locations of American investments. Commitments in these countries range from \$600,000,000 to \$135,000,000. A point that

By the close of 1929 about \$2,300,000,000 of American capital had been sent to South America and \$3,300,000,000 to Mexico, Central America, and the West Indies. In order of importance, it is found that approximately \$1,500,000,000 had been invested in Mexico, with an equivalent amount in Cuba. Therefore these two countries had absorbed more than half of our total Latin American investments. This in large part explains the prominence of these countries in connection with our Argentina, Brazil, Chile, Colombia, Venezuela, Peru, and Bolivia, in that order, as important locations of American investments. Commitments in these countries range from \$600,000,000 to \$135,000,000. A point that

¹ Few generalizations are applicable to all sections of the United States. This is even more true of Latin America, for the diversity of race, geography, social organization, and economic circumstances is so striking that differences are frequently more important than similarities. Yet the term "Latin America" will have to be utilized, while recognizing that it has inherent defects.

should be noted is that American financial interests in the Caribbean are of minor importance, except in the case of Mexico and Cuba.

Classification of direct investments, as contrasted with loans to governments, shows that mining and smelting take first place with nominal value of more than \$700,000,000; second comes sugar with some \$650,000,000; transportation and communications involve almost \$600,000,000; and petroleum producing and refining follow with more than \$500,000,000. Direct investments have been made by approximately 1,200 American organizations.

These direct investments are distributed geographically as follows:

| | |
|---------------------------------|-----------------|
| Cuba and the West Indies..... | \$1,054,000,000 |
| Mexico and Central America..... | 917,000,000 |
| South America..... | 1,548,000,000 |

Cuba leads with \$919,000,000, followed by Mexico with \$683,000,000.

What the value of the six billion dollar American investment in Latin America may be at the present time cannot be determined mathematically, but bonds of most central governments, provinces, and municipalities are now selling on a basis of actual or probable default; sugar, mining, and oil companies are operating at a deficit or at unsatisfactory margins of profit, with corresponding prices for their securities; losses of both capital and income in connection with the National Railways of Mexico and the Mexican activities of the Southern Pacific Railway Company require no elaboration. Certainly American investments in Latin America could not be sold for thirty-three cents on each dollar; probably twenty-five cents is an adequate estimate.

From the point of view of investment technique, moreover, our financial commitments in Latin America represent obtuseness rather than astuteness. Loans to governments, which should carry a high degree of safety, have involved almost as much loss to the investor as commercial commitments and afford no opportunity for business profits. Although short memories are characteristic of the financial community, sales of Latin American securities in the United States will probably remain negligible until business revival again causes pressure on the outlet for capital funds. This is well illustrated by the fact that during 1931 to date Latin American loans floated in the United States amounted to only \$2,000,000, as compared with \$410,000,000 in 1930.

Perhaps the clearest concept of what has recently occurred in Latin America may be had from a comparison with events in the United States around 1837. At that time great enthusiasm was aroused for the building of highways, canals, and railroads, and for the establishment of banks and commercial enterprises. Imagination far outstripped organization. Improvements which would have been valuable if economically constructed were not correlated with financial capacity of the population nor with the

business structure available for their operation. Hence capital, which was embarked as freely for those times as has recently been the case with American capital seeking foreign investments, was in large measure lost.

While Latin America is comparatively undeveloped, it does not follow that practically unlimited amounts of capital can be absorbed within a short time and yield satisfactory interest. Even the principal may be jeopardized. This point of view is emphasized by recalling that Latin America can hardly be considered as an area of frontier development, as was the case in the United States between the War of 1812 and the Civil War. Many of the settlements of Latin America antedate those in the United States. If the aggregate of conditions warranted economic growth comparable to that in the United States, such growth would not have been largely absent until the United States happened to have surplus capital and foreign investments became fashionable.

If the natural resources of Latin America possessed the commercial value which loan prospectuses were accustomed to portray, they would have been at least partially developed by private capital, either local or foreign, and loans to governments for their utilization would have been unnecessary. Suspicion rather than confidence should have been created because governments were attempting to borrow for projects which private capital had found unattractive. Admitting that postponement of many projects would have occurred if the government had not interfered, events have demonstrated that such projects were premature in the sense that they could not support the capital charges for their development.

Why did American underwriting houses bring out hundreds of millions of dollars of Latin American securities which are now in distress; why did the American public buy these securities; why did Latin American governments overborrow; why did American business men make direct investments in Latin America upon which enormous losses have been incurred? No simple formula can be suggested in answer to such queries. These phenomena were part of the war and post-war hysteria which appeared in almost every direction and should therefore be considered from the chastened point of view of profiting from painful experience rather than from that of attempting to discover scapegoats.

In their importunate zeal to purchase bonds of all categories of Latin American political divisions, American financial houses were by no means guiltless. Many of them were represented by incompetent agents, with little experience in financial matters of any kind and with casual knowledge or none at all of Latin American conditions. These agents were unfitted to act in a responsible fiduciary capacity for determining the channels into which American savings should flow.

A few of the most obvious shortcomings of underwriting houses will

be mentioned. In some instances a true picture of the budgets of the borrowing countries was obscured in bankers' prospectuses. This was made possible by misleading accounting methods which were in use by several Latin American governments, and which were often well known to the bankers concerned with the loans but not explained to bond buyers. Examples of incorrect accounting include extraordinary and special budgets, frequently containing items which should appear in the ordinary budget and thus indicating a spurious balance in the regular budget, periods of liquidation and various other devices by which the true financial position of the government was not revealed. Loans were also made to countries in which the currency was either precarious or worse. As an illustration, a study of the currency record of Brazil for a century is informative. From a parity which may be designated as 100 in 1821, parity had been changed four times by 1931 and now stands at 12 per cent of the original figure, with actual exchange some 47 per cent below nominal value. Probably no loan is justified to a government which has been unable to maintain its currency within reasonable limits of stability.

In certain cases the debt record of political entities whose bonds were to be distributed has not been correctly stated; in others, population, natural resources, or economic conditions have been distorted; in others, loans have been announced as being for productive purposes and the proceeds promptly squandered in armaments or otherwise frittered away; in others, secret commissions to political favorites have been allowed, excessive sums have been retained by bankers as interest or sinking fund reserves, proper interest has not been allowed on deposits for interest or sinking fund, or onerous conditions in connection with retiring the debt have been imposed.

Competition among American bankers for Latin American loans, many of which were thoroughly unsound and should have attracted no experienced banker, was so keen that instances arose where twelve or fifteen institutions would be squabbling for the same issue, with generously paid agents, on virtually unlimited expense accounts, vying with each other in the obsequiousness of their fawning upon Latin American dignitaries who were supposed, often incorrectly, to be able to influence the course of loan negotiations. When an underwriting house succeeded in obtaining a given piece of business, it had to fix the spread between the price paid to the borrower and that at which the bonds were offered to the public so as to cover costs of various loans which had been sought but not obtained. Hence both the Latin American borrower and the American bond purchaser were made to contribute liberally to a wasteful travesty from which neither could gain any possible benefit. Successful competition for loans finally resulted in the dangerous practice of purchasing issues at higher prices than were justified by the credit of the borrower and in

compromising those safeguards which should have been provided for the lenders. In short, this competition resulted in progressively less attractive and less safe securities being offered to American investors.

Economists probably agree that investment bonds should not be treated as an ordinary article of merchandise, like automobiles and chewing gum, and should not be sold by competitive advertising and personal solicitation. Bonds should be considered as a receptacle for trust funds, whether the individual is acting as trustee for his own savings or whether this function is being performed by a fiduciary. Various artifices employed for distributing merchandise are out of place when applied to investment securities and should be discontinued.

Although this appears to be a formidable indictment against American bankers and their methods—and in candor it must be admitted that abuses were widespread—the plane of integrity upon which American financial commitments in Latin America were made since the war was undoubtedly higher than had been the case in previous periods when Latin American financing was prevalent. In the earlier periods British and French interests had been dominant, and although the record of our own bankers is sufficiently unsatisfactory, it is not so unsavory as that of their European predecessors.

One of the recognized prerogatives of the so-called man in the street is to make mistakes and then attempt to shift the blame to others. No more fertile and well-cultivated field for mistakes exists than in how to handle money. It is not mere cynicism to suggest that if the public had not purchased inadequately secured Latin American bonds, bad as they have proved to be, it would have bought something worse. In spite of persuasive protestations by bond salesmen that obscure cities and provinces and central governments with long records of default constituted excellent credit risks, sober analysis would have demolished these blandishments, just as in the case of stocks and real estate which also sold at exaggerated levels. Perhaps the ordinary bond buyer, possessing no great financial technique, should not be blamed for his gullibility, greed, or other attribute which resulted in inducing him to purchase Latin American bonds when it is recalled that our foremost bankers recently fell into an analogous error, and for the same reasons, when they extended excessive short-term credits to Europe. Nevertheless, we may pause to mourn the fact that bond buyers who consulted their banks and acted in accordance with the advice of banks have fared about as badly as those who did not take such precautions. Even country banks were large buyers of Latin American bonds on the recommendation of their city correspondents, and generous holdings of such bonds constitute one of the points of weakness of our banking situation.

Persons who take American banks to task for their Latin American

bond fiasco should in fairness include those who purchased the bonds. A buyer as well as seller was required to complete each bond transaction, and failure on the part of investors to exercise ordinary self-control and good judgment cannot be condoned any more than can those shortcomings of bankers which have already been enumerated.

Great difficulty would be encountered in discovering important amounts of foreign bonds which have been purchased by investors because of altruistic feeling toward the borrowing country, desire to promote trade, or ambition to obtain political advantage in such country. Each of these motives possesses recognized force, but their effect on the ordinary American citizen is probably inconclusive in influencing the purchase of a specific foreign bond. Unless the buyer is convinced that such bond affords security of capital and attractiveness of yield equivalent to or better than other competitive offers, no sale will be effected.

Perhaps ignorance that more favorable financial opportunities may be found in other directions has resulted in the purchase of bonds of a given country by nationals of that country who live in the United States. But this is beyond the scope of ordinary finance.

In the absence of war, flood, hurricane, or some other compelling force of an unusual character, there is no way to coerce a political entity into borrowing money. Borrowing is an act of free will, and Latin American governments which now whine about being cajoled into overborrowing make about as convincing an argument as did Adam when he explained that he was seduced by Eve. Even this does not tell the whole story. Latin American officials swarmed to the financial district of New York. They needed no urging. There was little overpersuasion; in fact they had to be fought off. To be sure, these same Latin American officials now assume an injured air and intimate that their innocence was betrayed by sophisticated bankers. Inasmuch as Latin America got the money and apparently a considerable part will not be repaid, an equal case might be made that American bankers and their clients were the victims of Latin American subtlety.

Another curious attitude on the part of a few Latin Americans is an air of injury and reproach that American bondholders are so materialistic and avaricious as to wish to be repaid those sums which they lent in good faith. Instead of gratitude that substantial improvements which they now enjoy were made possible by savings accumulated in the United States and lent to them, they berate us on the one hand for loading them down with debt and on the other for refusing to extend further credits. So again the maxim is demonstrated that the creditor is popular when he lends and unpopular when he collects. In the present case, however, even when the loans were made we did not create much good will among those who were receiving capital which their credit did not justify.

Customs revenues play a far more important part in the fiscal scheme of Latin America than in that of the United States, and in general this overemphasis of customs constitutes a fundamental weakness in financial structure. Foreign loans have a prompt and pervasive influence on customs receipts, as such loans are almost certain to result in stimulation of imports. Finance ministers in Latin America are notoriously optimistic, and little provocation is required to convince them that any improvement in customs revenues, no matter how abnormal in character, merely represents merited and permanent increase in revenues. Hence budgetary and loan policies are proportionately adjusted upward. Cessation of loans is rapidly reflected in shrinking customs revenues, with the frequent accompaniment of budgetary deficits and defaults on foreign loans.

In the light of our present unhappy condition there is no escape from the conclusion that both the bankers who brought out Latin American bonds, the investors, speculators rather, who bought those bonds and the governments which contracted the loans were all at fault. There was more bad judgment than bad faith. Assessment of blame is only useful in avoiding mistakes for the future. A few precepts which clearly emerge are that bankers should not sell bonds without reference to quality, merely because uninformed purchasers can be found, that investors should not disregard the teachings of past financial experience in regard to unusually liberal yields on capital or else be prepared to take their losses without whimpering, and that overborrowing may be as disastrous to the borrower as to the lender. Credit is a sufficiently useful instrumentality that it should not be mistreated, either by borrowers, investors, or bankers.

Much discussion has arisen as to whether American bankers should insist that loans to Latin America should be used only for productive purposes. Aside from the impossibility of reaching any general agreement on the definition of "productive," it does not follow that so-called constructive loans are always safe loans. For example, construction of a highway would probably be considered a productive purpose, but if the enterprise has inadequate economic justification, either direct or indirect, the wealth and income of a government which might float a loan to build such road would be diminished rather than increased.

Attempts to require borrowed capital to be used exclusively for productive purposes can also be rendered futile by any government which wishes to waste public funds. Projects are selected which will meet so-called productive requirements of foreign bankers, and these are financed from the proceeds of loans, whereas they frequently should be included in the ordinary budget. Meanwhile, budgetary funds are diverted to those extravagant purposes which represent the real objective of borrowing.

American lenders should look to security for their funds and minimize

other considerations. Neither from the points of view of finance nor of international comity should American bankers or investors permit a loan to hinge on what becomes of the proceeds, provided budget, currency, debt record, political organization, and other factors are satisfactory. A different course represents offensive meddling in affairs not our business. While productive use of loan funds is desirable, if the borrower's credit is so tenuous that it is necessary to impute "productive purpose" to a loan in order to make it saleable, that loan is lacking in important factors of security.

✓ Another defect in our loan policy toward Latin American governments has been to provide funds for numerous purposes which could best be left to individual initiative. Extravagance in construction, location of public works so as to benefit particular private properties, uneconomic projects at the expense of the public treasury, and similar abuses have flourished in Latin America. Even admitting that the development of certain areas or specific natural resources might have been delayed, there is little doubt that those projects which had to depend on local capital are better planned and more economically constructed and avoid the serious burden of having to meet foreign payments of interest and principal. One of the anomalies of heavy borrowing abroad is that the domestic economy may have to be organized to the disadvantage of national interests in order to obtain foreign exchange for meeting debt service. Presumably economic thought has passed beyond the more crude forms of mercantilism and no longer believes that a country must export in order to be prosperous. There is no doubt, however, that foreign loans necessitate the exportation of goods or services although capital, labor, and enterprise might be more profitably devoted to the home market. This constitutes one of the most arresting economic reasons for questioning the desirability of foreign loans, as such.

Several Latin American republics which have defaulted on their foreign loans have had serious currency or exchange problems. Default in these cases has been about as much due to difficulty in obtaining exchange as to insufficient governmental revenues. Hence loans should be refused to those countries which have shown inability to handle their currencies in orderly fashion and to those whose economic structure is such as to create doubt concerning the availability of ample foreign exchange to meet loan requirements.

Foreign loans to backward countries are often open to question, even for purposes which might be agreed upon as productive. When capital has been borrowed, interest begins to accrue and there is pressure for rapid expenditure of loan proceeds. This either results in the adoption of immature plans or extravagant expenditure by reason of haste. Under the most favorable circumstances losses due to interest accruals on unexpended loan funds are considerable.

Foreign loans to cover budgetary deficits are so palpably injudicious that they may be disregarded. Service on loans for more legitimate purposes has the disadvantage of being a fixed charge, rather than one which expands with prosperity and contracts in times of adversity. Accordingly, the relative burden increases at the very time when tax-paying ability is least. No difference in principle exists between a foreign debt of a state and the funded debt of a corporation. Each denotes departure from the ideal in capital structure.

This reasoning would seem to impose rigid restriction on borrowing by Latin American governments. Payment for public improvements out of revenue is as sound a principle for a state as limiting expenditures to income is for an individual. There is the additional advantage that during times of prosperity government revenues tend to increase, and under careful management a considerable proportion of the increase can be devoted to capital expenditures. When revenues shrink during depressions these capital expenditures can be curtailed or eliminated with definite relief to the budget and to the taxpayer. A further refinement of this procedure is to retain part of excess receipts in prosperous times and create a fund which will be available for expenditures during periods of depression. But the important point is that fixed charges within the budget shall be retained at a minimum, and this is the antithesis of encouraging the policy of creating foreign debt, which not only incurs a fixed charge but presumably a prior charge.

Examination of the concept that debt charges have first claim on governmental income, even on customs receipts, shows that such concept is fallacious. Loan contracts for many foreign issues recite that debt service constitutes a first charge on all or a specified portion of the revenues of the state. Even with the drastic reduction in revenues of the several Latin American political entities, there is no case in which revenues do not exceed debt charges. This fact has not prevented default. Self-preservation is as much a law of governments as of individuals. Without maintenance of stable government, revenues cannot be collected, and the conditions in which individuals can carry on economic activity, which forms the basis of tax-paying ability, might well disappear. It is of little avail, therefore, that under favorable or even normal circumstances the service of a given loan may be covered three or more times by revenues pledged to such loan, unless an adequate sum over and above debt charges is available for maintaining the government as a going concern during periods of unfavorable income. For there is nothing more certain than that the government will retain at least as much of its revenues as may be necessary for minimum operating expenses, no matter what may be the tenor of loan contracts. Armed intervention or other form of pressure cannot alter this situation, as an orderly economic and political organization is

necessary for the creation of those revenues out of which debt service can alone be met.

Hypothecation of revenues in connection with foreign loans affords needless protection during periods of prosperity and is no complete defense in case of adversity. The practice is also obnoxious to national pride. Little advantage except in working out priorities and ratios of settlement in case of default on loans can be claimed for revenue pledges. Loans which have to be buttressed with pledges of revenue have too many disadvantages and weaknesses to be regarded as attractive.

Hence a new principle for evaluating proposed foreign loans may be formulated. Instead of computing the number of times by which total revenues cover debt charges, calculation should be attempted of minimum sums which are necessary to maintain the government as a going concern, with correlation of this amount with the lowest revenues which are likely to be collected in a year of depression. If such revenues are greater than minimum requirements for operating the government, the difference can safely be applied to service of foreign loans. There is hardly need for commenting on how widely this procedure differs from the method for determining safety applied to most Latin American bonds marketed in the United States.

Many government bonds have recently gone into default or are in danger of default because of shrinking revenues or exchange difficulties. When loans have been outstanding for several years, amortization payments constitute an important proportion of total debt service and in time exceed interest requirements. This affords a possibility of establishing effective safeguards for the loan. Loan contracts should require that when government receipts are in excess of specific sums agreed upon as normal, certain percentages shall be devoted to supplementary amortization of debt and that amortization may be reduced or suspended according to a schedule if revenues fall below normal. Numerous defaults could have been avoided by adoption of this device. Another method of applying this principle would be that in prosperous times the government would be required to deposit definite percentages of revenues in excess of normal with the fiscal agent, these sums to constitute a reserve for continuance of amortization during years of adversity. In short, a prosperity index should be applied to repayment of loans, rather than the present practice of compelling borrowing governments to pay equal sums during good years and bad, such sums representing declining requirements for interest and increasing amounts for amortization.

Within the scope of the thesis that no foreign loan or investment is justified unless the capital is safe and reasonable interest will be earned and paid, advantage to the United States from foreign long-term financing is most definitely obtained through the effect on our foreign com-

merce. Not only do loans and investments usually call for considerable expenditures within the lending country for capital purposes, with corresponding profit to those American industries which supply the capital goods, but there is continuing demand for repairs and replacements, technical advice, and various banking transactions which grow out of the original operation. But these advantages are not sufficient to compensate for losses of capital or interest on loans which are improperly secured. In short, they do not justify bad loans.

Out of the stress of the last two years one rather clear criterion for loans has become apparent. Unless the borrower obtains definite advantage, no sound basis exists for the transaction. It is not enough that an American bank needs securities for its salesmen to merchandise, that American investors are in the mood to buy almost anything called a bond, or that a Latin American government has the desire, although not necessarily the need, to borrow. Unless foreign capital strengthens the economic and financial fabric of the borrowing country, the loan in question will ultimately contribute to the kind of chaos which is now so vexatious from both the political and financial points of view. Because so many loans have created liabilities in excess of assets on the national balance sheet of the borrowing government, resentment against the United States is widespread and determination to keep the loans from going into default has been seriously weakened.

From the foregoing paragraphs it should be clear that the present writer places paramount importance upon safety for loans. Detriment both to borrowers and lenders from excessive or poorly safeguarded loans has been so disastrous that there should be no compromise with safety. A proposed loan in regard to which there is valid question about payment of principal or interest is a bad loan and should not be floated. Loans which at issue appear well secured frequently get into difficulty. Absolutely safe loans do not exist, and this is additional reason for not assuming avoidable risks.

No better examples of the advantage of keeping or getting out of debt can be suggested than Venezuela and Haiti. In the case of Venezuela, no foreign debt exists, and the internal debt is nominal. This country has escaped political disturbances of a serious character and has suffered little budgetary embarrassment.

Few countries are more formidably handicapped by tradition and physical disadvantages than Haiti, yet a vigorous policy of paying debts during favorable times and refraining from borrowing merely because loans could be obtained has left the finances of that country in excellent shape. Quotations of Haitian bonds are above those of almost every other Latin American country, the budget is virtually balanced, and Haiti still possesses relatively large unobligated cash balances in the

treasury. Countries of far greater potentialities, such as Brazil, Chile, Peru, and Bolivia, have suffered political or financial demoralization, or both, largely because of excessive borrowing.

If loans to Latin American governments are likely to be narrowly restricted, provided both borrowers and lenders pursue principles of prudent finance, does a field exist for American investments in Latin America which will be mutually advantageous to the investor and to the country in which the commitment may be made? In spite of unhappy experience with sugar plantations in Cuba and oil properties in Mexico, the agricultural and mineral resources of Latin America, together with many latent possibilities for the development of communications, manufacturing establishments, and commercial enterprises, offer fair promise for American capital. Recent revolutions should not obscure the fact that significant progress has been made in maintaining political stability; striking advance in the standard of living suggests that the population of Latin America has to some degree the will and the means of attaining more physical and cultural enjoyments; immigration and communications are gradually removing Latin America from among the so-called "backward countries."

Latin America has two major handicaps. Both of them help to explain why American loans and investments have tended to be disappointing. With the exception of coffee and bananas, the world could approximately maintain its present standard of living without Latin American products. For a short time there might be some scarcity of sugar, but this problem could easily be solved; Africa, Canada, and the United States can furnish all requirements of copper; the Malay States can produce ample tin; nitrate can now be obtained by chemical processes; petroleum is in sufficient supply from the United States, Europe, and Asia; wheat is abundant without Argentina; meat animals, hides, wool, and cotton can easily be procured elsewhere. Few outstanding natural advantages exist for Latin America either in types of commodities or in prices at which they can be placed upon world markets. Even the potential wealth of Latin America, so far as it has economic significance, has been grossly exaggerated.

Second, the Latin American population has not been characterized by resourcefulness, energy, efficiency, or thrift. Hence those natural resources which exist are not utilized effectively. A common error is for projects to be formulated by foreigners on the basis of generous natural resources or low wage rates in Latin America. Experience frequently demonstrates that total unit costs are not particularly low and often do not compare favorably with costs of competing countries, although those countries may have inferior natural advantages.

Under these circumstances development of Latin American resources

by local capital and enterprise will undoubtedly be slow, and many disappointments will accompany foreign efforts. In view of the deficiency of energy and skill which the Latin American population displays toward making the most out of its own potentialities, an admirable opportunity is afforded for immigration. Considerable progress in this direction has already occurred, particularly in southern Brazil, Uruguay, and Argentina, where German and Italian immigrants have made about as creditable a record as have German and Scandinavian settlers in comparable areas of the United States.

Instead of a storehouse of actual wealth, Latin America should be considered no more than a reservoir of economic potentialities, with these at present largely beyond the purview of world requirements. Profitable development on a large scale will occur only when prices of the various commodities which Latin America produces rise until the comparatively high costs of that region can be met or until immigration and foreign capital reduce costs to current competitive conditions.

Although producers of raw materials have been more seriously affected by recent declines in commodity prices than have manufacturing and distributing enterprises, there is some basis for believing that the next phase of world economy will be definitely favorable to countries specializing in raw materials. Preference to live in cities has been one of the outstanding characteristics of the twentieth century, and this has gradually caused overemphasis of manufacturing and commerce until competition in these branches of activity is probably as serious as among producers of raw materials. Greater progress in technical improvements have been made in industry than in agriculture, with further accentuation of industrial competition. Not only are the foodstuffs, minerals, and forest products of Latin America likely to enjoy more favorable competitive conditions as compared with leading manufacturing countries, but nothing prevents important progress from being made in the development of manufactures in several Latin American republics.

As a net debtor, Latin America has been handicapped by the recent world trend toward increased tariffs. American creditors have also been injured. Nevertheless, while emphasizing our own tariff sins, which are great, we should not ignore those of many Latin American countries which are equally flagrant. A surprisingly large percentage of Latin American exports to the United States enter duty free, and the average duty levied on all Latin American commodities entering the United States is much lower than that imposed by the several Latin American countries on products originating in the United States. Although our tariff policy is certainly open to criticism, the countries of Latin America are not in position to cast the first stone. That our tariffs are much less at fault than declining commodity prices in causing economic distress in Latin

America is amply proved by the fact that the volume of imports has fallen quite modestly, sharp decline being limited to value.

Such striking resemblance exists between the economic history of the United States in the nineteenth century and that which has characterized the elapsed portion of the twentieth century for Latin America that continuation of this resemblance is not unlikely during future decades. Already Latin America possesses two of the four largest cities in the western hemisphere. Capital and management for industrial and commercial enterprises have been obtained from abroad much as occurred in the early years of our own country.

Another striking analogy exists. European capital which came to the United States tended to take the form of bond investments, whereas subsequent events have shown that bonds had little greater safety than ownership of carefully selected natural resources and that mere ownership of bonds has prevented the lenders from sharing in the phenomenal development of those resources. Somewhat similar mistakes have been made by American capital in Latin America. Preference for loans to governments during recent years, as compared with direct investments, has already been mentioned, and even when commitments were to be made in Latin American natural resources or commercial enterprises, little capital was attracted except by participation in bond offerings.

Lack of reliable and comprehensive information and fear of placing capital within the jurisdiction of Latin American courts have undoubtedly been responsible for this attitude. Utopian labor laws have also had a restraining influence. However, if the bond of a company doing business in Latin America affords proper security, it is obvious that such bond must be protected by good junior securities, and the latter offer possibilities of capital expansion as well as safety of principal. Soundly conceived projects in rapidly developing areas and ownership of natural resources within such areas have often proved their financial attractiveness. Yet our investors have been inclined to avoid ownership in favor of promises to pay.

Adequate machinery for assembling and evaluating information on which Latin American investments may be made does not now exist. Certainly underwriting houses have been unsound guides. Departments of our government cannot appropriately make recommendations in regard to the business merits of particular enterprises or the stability of specific governments. No comprehensive and reliable information is available in regard to funds already committed in Latin America, although this is far simpler than appraising the merits of new propositions. Various proposals for the formation of organizations comparable to the British Council of Foreign Bondholders have been made, but the insuperable difficulty has thus far been that no way has been found to finance an

organization whose opinions could be regarded as disinterested. Bankers have exhibited certain willingness to establish a protective organization, but the experience of the public with banks which have underwritten Latin American bonds has been such that a protective organization financed by banks would inspire little confidence. Actual holders of Latin American securities are so scattered and have such small individual interests that there is almost no possibility of obtaining from them sufficient funds to support a competent organization operated for their benefit.

Recognizing that competition for loans among American underwriting houses has been largely responsible for whittling down those safeguards which in their mutual interest the bond buyer and the borrowing government should require, certain persons are now considering whether an organization should be created to pass upon the merits of proposed new issues rather than to salvage issues which have gotten into trouble. This proposal is outlined for discussion, rather than recommended. Such an organization would correspond to those for the assay of ores, the testing of materials, or any one of numerous enterprises by which prospective purchasers can obtain authoritative technical opinions on the quality of merchandise offered for sale. Such an organization could not be subservient to governments nor to bankers seeking loans nor to investors who are looking for market tips. Possibly a practicable method of financing such a clinic of preventive finance would be to make a small charge, say, .25 per cent, on the proposed issue, payable whether the loan is approved or rejected.

If such a technical bureau should become well established, a government or banking house would find it difficult to sell an issue of bonds which did not embody the qualifications required for obtaining the approval of the bureau. Or, stated in another way, the price at which an unapproved loan could be sold would be so much more disadvantageous to the borrower and the cost of distribution would be so much greater to the banking syndicate that sale would be unassured if not impossible. Should such an organization exist, no investor would have great cause for complaint if he should get into trouble with bonds which had not been submitted for approval or had been sold without being able to obtain approval. On the constructive side, such a bureau of inquiry, if competently organized and honestly conducted, should soon be able to command such confidence that its hallmark on a bond would mean much to the borrower in the way of reduced interest charges, and submission to the bureau would therefore be insisted upon by the borrower.

Modern thought is distinctly in the direction of prevention rather than cure. After an ill-conceived loan has been issued, very little can be done to prevent evil consequences both to debtor and creditor. It is clearly in the direction of preventing such loans that ingenuity can best be em-

ployed, although the organization suggested in the preceding paragraphs should also be useful in default and refunding negotiations.

If bankers are subject to deserved criticism for selling improperly secured Latin American issues, if bond buyers cannot evade the responsibility of allowing their judgment of safety to be warped by the temptation of high yields, and if Latin American governments have to assume merited censure for betraying positions of trust by plunging into reckless borrowing, has our government contributed to the general disaster, which has now befallen American investments in Latin America?

In the early years of the twentieth century our government invited certain bankers and business men to intervene in specific Latin American situations. Such policy cannot be defended, and it has long since been discontinued by the government. There is a more subtle type of governmental intervention which is equally undesirable. It takes the form of propagating the doctrine that our foreign trade, notably exports, should be extended aggressively and that foreign investments constitute the most certain means of stimulating trade. This doctrine is preached to the farmer, to the manufacturer, and to the banker. Consuls and commercial attachés through activities in the field and reports to the home government try to promote trade and investments, whereas in many cases warnings of danger involved in proposed loans or commercial transactions would be more appropriate. Economic analysis can reveal no more reason why a government should employ taxpayers' money in attempting to sell automobiles in Argentina than in New York City. Foreign trade and investments should not be encouraged; neither should they be discouraged. They should develop along lines of orderly procedure, with no occasion for special governmental solicitude.

A second activity or attitude of the government which may well be called into question involves the complex problem of protection. This question is divided into protection of the general national interest and protection of individuals who live in the Latin American republics or acquire some kind of financial stake in these countries, whether by loans to governments or by direct investments. In an effort to safeguard the public interest, the Department of State adopted the policy of requesting that all proposals for loans to governmental entities should be submitted for the purpose of determining whether such loans would be in contravention of national policy. This procedure has been in effect since 1922, and certain loans, notably the coffee valorization loan to Brazil, have been abandoned for original issue in the United States because of objection by the Department of State. While American bankers desisted from bringing out this loan in deference to objections by the Department of State, the loan was issued in London, and a substantial portion of the sterling bonds was distributed by American bankers in the United States.

Although the Department of State specifically disclaims responsibility for passing upon the business merits of proposed loans, it is beyond question that bond salesmen have on numerous occasions emphasized the fact that their wares have passed the scrutiny of United States officials. Stated in other terms, there is little doubt that considerable amounts of otherwise unsaleable Latin American bonds have found a market in this country because of the rather innocuous visa to the effect that "the Department of State perceives no objection" to the proposed issue.

As there is no legislation which requires underwriting houses to inform the Department of State in advance of proposed loans, and as no sanctions exist for preventing the flotation of loans which might be offensive to the Department, the existing practice of passing upon loans from the point of view of national policy should be abandoned or should be placed upon a legal basis. Abandonment seems clearly preferable. While responsible underwriting houses might defer to the wishes of the Department of State, it is also probable that such houses would not seek to underwrite issues which are likely to meet disapproval. Less scrupulous houses would either refrain from informing the Department in advance of proposed issues or would fail to respect objections which might be made.

Scrutiny of proposed foreign loans from the point of view of national policy not only affords little protection to our interests, but the Department places itself in the equivocal position of assuming certain indirect moral responsibility by not disapproving loans which are economically unsound, though not politically objectionable. Disapproving the loan policies of certain Latin American republics while sanctioning those of others may also prove a source of embarrassment. Under the terms of various treaties, approval by the United States government is required before certain Latin American governments can increase public debt. But more reason exists for diminishing present responsibilities, where this can be done without disregarding definitely assumed commitments, than for accepting new obligations of a vague and offensive character. In like manner, American banks should evaluate the advantages and difficulties which have accrued under loan contracts with Latin American governments involving budgetary, currency, and other stipulations before entering into new agreements of these kinds.

For the United States, these treaty obligations, involving certain financial features, impose some disagreeable duties without corresponding advantage. They represent charity and can only be defended as our contribution to the advancement of backward countries. It has recently been popular for Americans to condemn these treaty relationships, on the ground that sovereignty of the states involved had been invaded. In most cases, this attitude of our own population results from lack of first-hand

knowledge. Citizens of a demoralized Latin American republic who have been exploited by their own politicians do not resent assistance from the United States in terminating abuses, when this takes the form of technical commissions, such as those headed by Professor Kemmerer, but expeditions of marines are not always popular. Thought of these citizens is upon public funds which are no longer stolen, upon roads, hospitals, and schools which are provided, and not upon philosophical questions of sovereignty. Yet the politicians, most of whom are lawyers of a sort, grow eloquent in depicting the anguish of soul with which the people involved have seen their alleged independence impaired. Such politicians are at least correct in recognizing that their own former activities have fallen on evil days. They are no longer able to regard the public treasury as a happy hunting ground. Under American control the government pays its debts and exercises probity in its financial policy, all of which makes the politicians think back with regret upon the termination of their own régimes. Yet the population as a whole takes this change complacently, often gratefully.

Intervention in behalf of American nationals who have failed to receive proper protection of person or property in foreign countries involves legal and political problems of the utmost complexity. International law seems to sanction intervention only when the national of one country has conducted his activities in strict accordance with law, has been injured in his person or property, has exhausted legal remedies available locally, and when there has been palpable denial of justice. All of these factors afford so much scope for differences of opinion regarding fact or law that divergence of conclusion is not only probable but almost inevitable as to whether a given case justifies intervention.

Few if any instances can be cited of intervention by the United States government except upon invitation of the government concerned or after prolonged provocation and when a large number of those most intimately acquainted with the entire facts surrounding the specific case have considered that failure to intervene would represent infringement of the rights of American citizens to reasonable protection by their government. With little question there have been more instances of refusal of the United States government to intervene, even in meritorious cases, than of hasty or unwarranted support of fictitious complaints of loss or damage by American citizens.

Much has been made of the fact that the United States shows no inclination to intervene in the case of strong powers but adopts this procedure only against the weaker republics. Criticism of this character fails to take into account that flagrant denial of justice does not occur in stable and responsible states. In countries where laws afford proper protection to foreigners and in which courts have established the reputation

for honest enforcement of laws, slight reason for intervention can arise. Actual experience bears out these a priori expectations. Definite proof of rectitude on the part of American citizens claiming protection and of shortcoming on the part of the Latin American government concerned has constituted and should constitute the only basis for actual intervention by the United States.

Recently a novel policy has been proclaimed by the Secretary of State. It is that protection of American lives cannot extend to foreign countries as a whole but only to certain zones along the seacoast. This inept pronouncement implies that an American doing business in Havana would be accorded the support of his government to which he is legally entitled but that one acting in precisely similar fashion in Bolivia would have no assurance of assistance if his rights should be invaded. Mere recital of this doctrine indicates the added difficulties which it will create for citizens of the United States attempting to live or do business in Latin America. Such a statement of policy by the British, French, German, Italian, or Japanese government is inconceivable, and our own government should promptly recognize that duty to its citizens is not a matter of geography.

Criticism has frequently been leveled at the Department of State for alleged lack of continuity of policy in dealing with Latin America. While certain principles have to underlie intelligent and effective conduct of foreign relations, practical application of these principles is always a matter of judgment. Difference of opinion often exists as to whether a given principle is involved, let alone how it should be made effective. In short, the Department of State should be commended rather than censured for considering each case as it arises on its individual merits. To fit principles into a given set of facts is preferable to disregarding facts in order to maintain the theoretical integrity of a body of doctrine. Almost any policy which would have been applicable to conditions in Latin America fifty years ago would be out of place today. All that can be reasonably required of the foreign office is that it be accurately and promptly informed of developments in Latin America and that action be suited to such developments as occur.

Methods of settling controversies between governments present unduly complicated questions for discussion at this time. Whether adherence to the World Court, unilateral or multilateral conciliation, arbitration, or armed intervention constitute appropriate procedure are matters of wide difference of opinion. Historically, there is no recent case of intervention in Latin America by the United States except for adequate cause. Direct action has frequently been as much for the protection of other foreign interests as for those of the United States, and was predicated upon the inconsistency of objecting to measures which might be taken by other

foreign powers for protecting the interests of their nationals, while our government refused to assume this responsibility.

To safeguard American interests abroad, notably in troubled areas, is palpably a more difficult task than to provide an orderly domestic administration. Tendencies toward irresponsibility on the part of certain governments cannot afford sufficient excuse for the United States government to evade its obligations. Bryan's doctrine that Americans should keep their lives and property away from dangerous places is hardly consonant with modern concepts of international comity. While the United States government should participate in every promising proposal for peaceful settlement of disputes, and while positive action toward governments which do not meet their obligations should never be hasty nor without adequate cause, there should be no hesitation about preferring intervention to abandonment of legitimate American rights and interests.

Recent policy of the Department of State has not inspired American business men with great confidence so far as assurance of proper support of commercial and financial interests abroad is concerned. Temporary favor of a foreign government or people which is obtained by sacrificing the property rights of our own citizens has been too dearly bought. Permanent respect, which is the only solid basis for fruitful international co-operation, cannot be established if foreign governments are with impunity permitted to infringe American rights.

One of the reasons why American loans and investments have gotten into difficulty in Latin America is that some of the less responsible governments have apparently made a point of seeing how far they could go in harassing American business and financial interests and still avoid intervention. As the precise point at which direct action will be adopted by the United States cannot be known in advance, the stage is well set for the pleasant pastime of teasing the eagle. These governments well realize the extent of American and world opinion against intervention under any circumstances and take advantage of this restraining influence on American policy.

Accordingly, armed intervention and punitive expeditions should become matters of international concern, so that a single country will no longer need to assume opprobrium and be subject to implications of improper motive for doing the unpleasant police duty of compelling irresponsible or malicious governments to preserve that degree of orderliness and justice which progressive society now demands. Joint action by creditor governments, possibly through the Financial Committee of the League of Nations, might have avoided defaults by certain Latin American political entities or might prevent defaults which now seem to be inevitable.

To summarize, American capital was loaned to Latin American governments in excessive amount; competition among underwriting houses of this country and as between American and foreign banking groups was largely at fault; many enterprises which have been sponsored by Latin American governments and financed by foreign loans should have been left to local enterprise; loans which require pledging of revenues or foreign administrative intervention for making them saleable are of questionable desirability; an organization for dealing with defaults and for preventing the flotation of unsound loans in the future is seriously needed; such organization should not be a governmental bureau, nor should it be under the control of underwriting houses; loans can only be justified when there is definite advantage for the borrower and security for the lender; lenders should not undertake to determine whether loan proceeds will be expended productively, but should insist on ample security; American interests will best be served by commitments in natural resources and business enterprises in Latin America rather than by loans to governments; the Department of State should not undertake to pass upon foreign loans; protection of legitimate American interests should be unquestioned and should not be confined to the seacoast; governmental policy should be flexible and in harmony with changing conditions; intervention is distasteful but should be employed rather than permit American rights to be invaded; intervention might well be international in character and should be invoked for preventive as well as punitive purposes; intervention need not be confined to military activities, but may consist of authoritative financial advice to countries which are inclined to forget that the best way to prevent wars and effectively utilize natural resources is to deal fairly with the persons, property, rights, and interests of others. The United States is so deeply committed by reason of its foreign investments that it cannot avoid heavy responsibility for eliminating those abuses and mistakes in policy which have led to the existing economic and financial disorder so vexing both to Latin America and ourselves.

DISCUSSION

VICTOR S. CLARK.—What I shall have to say about the papers of Dr. Cumberland and Dr. Winkler will not underline substantial differences of opinion with either of these speakers.

Dr. Winkler's classification of our financial undertakings in Latin America into portfolio investments—that is, loans to foreign governments—and direct investments might profitably be amplified so as to divide the latter into two groups, those contingent upon public franchises and concessions, and those entirely upon a private basis. The first of these two groups may be affected with a political interest, and I should fancy that the security of such investments might, in certain contingencies, be influenced by political uncertainties as definitely as the safety of foreign government bonds. Both Dr. Cumberland and Dr. Winkler point out that direct investments exceed more than four-fold portfolio investments in the Caribbean countries, including Mexico and Central America, whereas portfolio investments greatly exceed direct investments south of that area. If we include within the Caribbean region Venezuela, which has no foreign debt, but where nearly a quarter of a billion dollars of American capital has been placed in private enterprises, this difference is still more striking.

Another fact to be emphasized in Dr. Winkler's figures is that since 1913 our investments in Europe have increased nearly four times as rapidly as our investments in Latin America. Whatever criticism may be made of the artificially promoted movement of American capital to our southern neighbors would seem, therefore, to apply with equal force to the methods by which certain trans-Atlantic securities were placed in the American market.

Dr. Cumberland's recommendations are so well advised that they scarcely need discussion. I think most of us will agree that the Department of State ought not to pass on foreign loans even for the purpose of easing its own diplomatic burdens. That practice proves in experience to carry with it an inescapable obligation of tutorship, which is onerous to our government and misleading to investors. A strict application of the *caveat emptor* doctrine to dealings in international securities will probably do more than the blessing of a political godfather to promote the soundness of such obligations. Any official intimation that the United States will intervene to protect the legitimate interests of its citizens only within the coastal areas of foreign countries can hardly be construed as a general policy. Dr. Cumberland's recommendation that where intervention is unavoidable it should be international in character, and should be invoked for preventive as well as punitive purposes, would presumably be limited, at least in the Caribbean area, to nonmilitary measures.

We all share, I am sure, Dr. Cumberland's desire to see an independent, non-governmental fact-finding agency established to inform prospective investors of the true conditions under which Latin American securities are issued. The difficulties that such an agency would encounter in analyzing the government revenues and expenditures of certain of our neighboring states would be very great, and perhaps insurmountable. A recent personal experience in one of our own dependencies has impressed me with the labyrinthine

character of the treasury and audit accounts that form the raw materials for such research. Yet financial houses in this country have in some instances carried out such investigations with a considerable degree of success.

Coming now to the question of direct investment in non-public, private enterprises—for there is not time to broach the franchise question—it seems to me that we need, particularly for the Caribbean area, an authoritative study of the relative social and economic advantages for the native population of the plantation and the peasant system. This is not primarily an investment problem; but it touches fundamentals upon which the long-time safety and remunerativeness of certain kinds of capital placements rest. My provisional opinion is that the plantation organization is inevitable in the more important branches of staple tropical agriculture. The employees of most American plantation corporations appear, as a rule, to be better off materially than the neighboring peasantry. On the other hand, labor importation by great corporations, such as has occurred in Cuba, is of doubtful advantage to the country where it occurs. It encourages an overexpansion of certain industries, and lowers the civic standards of the resident population. But even where labor importation does not occur, a plantation organization of agriculture is likely to cause technological unemployment. These conditions may produce an unbalanced national economy, social unrest, and political instability, detrimental to alien investment interests.

Last of all, Dr. Cumberland and Dr. Winkler have written their papers in the sombre atmosphere of our chief financial center, in the shortest and darkest days of an exceptionally gloomy year. I am not so sure that the attitude of those who may discuss this question at some future meeting of our two associations will find such a wide margin between the promises of 1929 and the actualities of the time in which they speak. And as that margin narrows, the spirit of censure may somewhat abate.

WALTER H. C. LAVES.—The papers of Dr. Cumberland and Dr. Winkler emphasize three major problems in the field of foreign investing. The first problem arises from overborrowing by backward countries and involves setting up a regulatory agency which will, on the one hand, determine how much can safely be borrowed by a given prospective debtor, and which will, on the other hand, give to prospective investors the complete facts about the financial status of the debtor country. As both of the previous speakers have suggested, backward countries have been encouraged to borrow beyond their resources, and bankers have been overzealous and not altogether scrupulous in selling certain foreign government bonds to unsuspecting investors.

The second problem centers about the scrutiny of foreign loans by the Department of State, and raises questions of policy in view of the inevitable effect which such scrutiny has upon the investing public. In particular, this raises the question of the moral responsibility of the Department in the event of default by a government to the issuance of whose bonds on the American market it did not raise objection.

The third problem is that of the protection of the investments of its citizens by the United States government.

Dr. Cumberland suggests that the first of the three problems might be par-

tially solved through a commission of nonpartisan experts who would pass upon a proposed loan and whose approval of it would enhance the market value of the bonds, while its disapproval might preclude satisfactory sales. As I understand the proposal, this body would not in any way attempt a solution of the second and third problems, except in so far as the exercise of greater care in the flotation of loans would reduce the necessity of government scrutiny and protection.

I would like to suggest that the three problems are so closely related that some one authority should attempt a solution of all, and that since they are of more than national concern, this authority should be international. To grant to a commission representing American holders of foreign government bonds the functions suggested by Dr. Cumberland would, perhaps, protect the interests of the American bondholders. But it would not protect the interests of the debtor government. It would not serve as a body which could map out a long-time program of financing for weak debtor countries, since creditors in other countries might float loans, even when they were advised against by the American commission. Its existence would not place a curb upon the policies of government scrutiny of bonds or of government intervention for the protection of foreign investments; in fact the existence of this commission might actually increase government action in both respects, in view of the concentration of interests. Finally, since this body would represent only the creditors, it would have little concern for the international effects of proposed loans.

What we need, rather than such a partisan commission, is one which combines three interests: first, that of the investor; second, that of the debtor country; and third, that of the international society as a whole.

It is suggested, therefore, that an international body similar to the Financial Committee of the League of Nations might be set up to perform the functions which Dr. Cumberland's commission would have, with the added power of outlining and administering any controls which may become necessary in the event of threatened or actual default. Because of the international character of the body, and because it alone would have the power of passing upon loans and the right of intervention in the event of default, long-time plans for financial reconstruction could be effectively carried out, and government interference with foreign investing would become unnecessary. Moreover, this international body could withstand pressure for the approval of loans better than national governments, which today sometimes dare not disapprove economically unsound loans because of the political implications for their international relations.

While it is true that such international control might cause some ill-will and while certain countries which are overcharged with a sense of their greatness would resent the proposal that they submit their exchequer to the scrutiny of such an authority, I believe that this would be merely a matter of transition, and that a few additional financial analyses such as the League of Nations Financial Committee made for Austria would soon instill confidence in the ability and impartiality of the international body.

In conclusion, I would say that I should prefer not to invest anybody with the authority I am proposing to give to this international commission. But the

alternative, which is the policy we have been pursuing during the last hundred years and which has been so admirably reviewed by both speakers, appears most unsatisfactory and in need of complete revision.

JOHN RICHARD MEZ.—To the economist, the large-scale foreign investments of modern times present a novel problem. The flow of capital from one nation to the other is as much the result of a country's obligation to balance its accounts, as it is the effect of a deliberate policy of borrowing and lending. America's credit balance of international payments dates from the World War; it has been accentuated by the tariff laws of 1922 and 1930 restricting the importation of goods. The outflow from the United States of investments amounting to over fifteen billion dollars, one-third of which went into Latin America, should therefore hardly be termed "excessive" or "unwise," in that it is the inevitable corollary to America's position as a creditor nation. It is neither "dollar diplomacy" nor deliberate "imperialistic encroachment" upon Central or South American countries that has caused these huge capital exports, but rather the inexorable operation of natural economic forces. The excess capital accumulated in the United States from European countries, in payment of exports during and since the World War, has been the chief impetus to this outflow of international investments. In permitting the development of an international financial system which results in the unilateral transfer of such large sums of capital from one country to another, without adequate facilitation of the balancing of payments, we should not be surprised when we ultimately arrive at an impasse, and an overexpansion of foreign investments. Once a heavy international indebtedness has been created, high protective duties erected against the principal products of these debtor countries will naturally render the repayment of principal and interest more difficult and tend to throw the machinery of international payments permanently out of gear. Under such conditions, no military "protection" nor any other outside agency will, in my opinion, be able to insure safety, and ultimate repayment, of these foreign investments.

Cuba offers a striking illustration of the effects of the United States tariff legislation upon American capital invested in the island. At the turn of the twentieth century, the United States had invested in Cuba about \$50,000,000. In 1928 the American holdings in Cuba were estimated at thirty times that amount (\$1,505,000,000). But even this stupendous sum represents only one-half of America's total investments in the Caribbean region alone. The greater part of this capital—about \$800,000,000—was invested in the sugar industry, the rest in mining, public utilities, etc.; moreover, Cuba's entire public debt is held in the United States, so that about 15 per cent of Cuba's wealth is represented by American investments. The advent of so much foreign capital into Cuba has given great impetus to the economic progress of the island and unquestionably led to a higher standard of living of the Cuban people. Cuba thus offers an excellent corroboration of the beneficial, rather than detrimental, effects produced by foreign capital (just as, incidentally, the United States was largely developed in the early days with the help of capital imports). If there has been any interference with Cuba's sovereignty or political independence, this was not contingent upon these investments. Nor were the severe

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economic hardships suffered by Cuba in the more recent past caused by foreign capital. They were primarily due to the tariff on sugar, Cuba's principal product. The sugar duties were largely responsible for the reduction in the past decade of Cuba's exports to the United States to one-third (from \$876,000,000 in 1922 to \$120,000,000 in 1930). American exports to Cuba (particularly of automobiles!) have similarly dropped, as for example from \$200,000,000 in 1926 to \$93,500,000 in 1930; i.e., to less than one-half in four years. The inhabitants of the island of Cuba now find themselves in the grip of a serious economic depression which has led to a tense political situation, and even to food riots. American investments in Cuba have greatly depreciated in the past year or two, as a direct and indirect result of these tariffs (from \$1,500,000,000 to about \$900,000,000, or by two-fifths). Admitting that a considerable value of capital may have been added by the American sugar tariff to the domestic production or to that of Porto Rico, Hawaii, and the Philippines, it is questionable whether this increase in capital value will suffice to compensate for the losses incurred in Cuba (not to speak of the higher sugar price to be paid by American consumers, nor of the losses suffered by the industries and workers formerly engaged in the manufacture of United States exports to Cuba). An adequate protection of foreign investments should therefore be based on sound international commercial policies at least as much as on military force or government control.

Mr. Cumberland insists that protection of legitimate American interests should be unquestioned. If by this he means military protection, he might well be asked whether the public investing its savings in domestic enterprises should not be similarly safeguarded by military force against all risk. It is hard to see why the domestic investor should assume greater risk. Moreover, in the economic process by which the modern world lives, military force is hardly an effective instrument to insure permanent productivity of financial stability, as clearly demonstrated by past experiences. The reasons for this are brilliantly set forth in Norman Angell's *Great Illusion*. The failure of countries like Russia, Germany, or France, for example, to meet their international obligations could hardly be remedied by the dispatching of soldiers or marines. In 1923 the French invaded the German Ruhr district, but they failed completely to produce any tangible financial results.

Intervention in the affairs of a foreign country, when it becomes necessary, might in modern times preferably be undertaken through joint international rather than national action. In recent years, new methods have been developed in the handling of international problems. The technique of international financial co-operation has been successfully applied by the League of Nations in Austria, Hungary, Bulgaria, and Greece. To be sure, at the present juncture, the League of Nations or the World Court could hardly be considered to be acceptable agencies for the protection of America's interests in the Caribbean, but the Pan-American Union, or still better, a group of leading Latin American countries, might well be asked to undertake such joint interposition in the future, when necessary.

With the restoration of an improved Haiti to self-government in the past year, with the gradual withdrawal of the marines from Nicaragua, with the

new policies inaugurated by President Hoover, public opinion at home and abroad has come to realize that the United States does not covet the Caribbean or Central America as a permanent field for political expansion or imperialistic conquest. "We have no desire for territorial expansion, for economic or other domination of other peoples," President Hoover proclaimed in Boston on October 15, 1928. Our democratic system he declared to be "the very negation of imperialism."

The United States, without being unmindful of its trust and interests in the Caribbean, without abandoning the Monroe Doctrine or the necessity of security, has, after many trials and tribulations, and after many changes in policy, gradually come to recognize that her own interests as well as those of other nations will best be served by the fullest possible economic expansion of the Caribbean, with political independence of that region preserved and respected, as far as is compatible with international obligations, on the basis of friendly co-operation and helpful advice in the development of resources and the maintenance of high standards of government and public finance. The advent of American capital and enterprise in the regions south of the Rio Grande has already led to a rapid growth and great economic progress. If the economic prosperity and the true interests of the American investor are to be fully preserved in Latin America, and particularly in the "Mediterranean of the Western Hemisphere," if these populations are to enjoy a steadily increasing standard of living, and to be liberated from ignorance, illiteracy, and disease, the peaceful development of their resources, with the continued assistance offered by the United States, will be of paramount importance. The Monroe Doctrine, in this century, may well be effectively maintained and supplemented by new forms of international co-operation and mutual economic assistance, in keeping with the new demands of international interdependence, and the declared policies of the renunciation of war as an instrument of national policy. On the other hand of course the new art of investing a nation's surplus wealth requires skill and eternal vigilance, for what profiteth it a nation to gain all the world's gold, and to lose its foreign investments? But Polonius' advice, "Neither a borrower nor a lender be; for loan oft loses both itself and friend," cannot be applied in our modern economic world with its international ramifications and evergrowing international interdependence.

BENJAMIN H. WILLIAMS.—The paper of Dr. Cumberland was sent to me in advance of the meeting, and I consider it to be a real contribution arising out of his rich experience with Latin American finance. If, being a political scientist, I shall confine myself to the latter part of his paper which deals with intervention and if I shall dissent somewhat from his conclusions, I trust that my attitude will not be interpreted as a failure to appreciate his excellent treatment of the economic aspect of the question which constitutes the greater part of his paper.

In all of the great creditor countries there exists a sentiment among those citizens who invest in weaker and somewhat unstable countries that intervention is an appropriate procedure for the protection of property. In such groups a mystical faith is sometimes held in the almost infallible justice of

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such interventions, a belief which arises from the legal concepts, the dominating culture, and the assurance of the creditor people. But is the creditor nation always right? Remember our defaulted state debts and the exalted righteousness with which some senators have fought to keep these unpaid obligations beyond the possibility of arbitration. Remember also some of our most important interventions as, for example, that in Panama in 1903 in which the reason for intrusion seems to have been the failure of the Colombian Senate to agree to lease us the canal zone promptly for our price of \$10,000,000. The payment of \$25,000,000 later was an acknowledgment of error both as to the method of procedure and as to the amount of the price. By the very nature of these complicated questions they cannot always be settled justly on the unilateral action of one party and that action taken under the emotions which accompany a resort to arms. We may at least expect a distribution of errors according to the theory of probability.

In answer to the charge that the United States intervenes against the weak and not against the strong, we are told that the reason is legal. The weak nations furnish American property with less protection than do the strong and stable governments, and, therefore, our interventions are naturally against the weak. This does not seem to be an entirely adequate explanation. By the very nature of the armed intervention process, it cannot be carried out profitably against strong governments. That would mean serious war and the ultimate costs would be possibly a thousand times as much as the value of the property involved.

Russia, some years ago, nationalized the property of a number of American corporations, repudiated large amounts of bonds held by American citizens, and canceled a debt of more than \$190,000,000 owed to the United States government. No Latin American country has ever acted in this summary and sweeping fashion toward American property. If intervention is based on great moral and legal principles, if it works against the strong as well as against the weak, if it is not a matter of geography, the United States should take steps to recover this property. Calvin Coolidge, who set a high standard in protectionist doctrine, said that the person and property of the citizen are part of the general domain of the nation, even when abroad. These are strong words. If they are true we should send an expedition to Russia. Perhaps we could induce the founder of the doctrine, Mr. Coolidge, to lay down his pen and, as Napoleon once did, lead a march upon Moscow. But, so far as can be learned, no serious suggestion to do this has thus far been made. May I repeat, by the very nature of armed intervention it cannot be used with profit against strong countries.

It has been stated that the treaties for financial control in Latin America impose disagreeable duties upon our government. "They represent charity and can only be defended as our contribution to the advancement of backward countries." To my mind the "white-man's-burden" theory of our treaty controls is not entirely enlightening. The fact is that our controls in Cuba, the Dominican Republic, Nicaragua, and Haiti were all undertaken clearly on the theory that they in some way helped the United States, whether by the safe-

guarding of the enlarged Monroe Doctrine or by the establishment of sound credit and the maintenance of a higher level of prices of securities held by American investors.

When the subject of the collection of customs by the United States in Haiti was being considered between the two governments in 1914, the Haitian minister of foreign affairs was interpellated in the Haitian Senate regarding the negotiations. During the questioning a Haitian senator took the floor and read the draft of the convention being considered between the two governments. The enraged Senate then arose as one man and leaped at the unhappy minister who left the chamber at top speed. An armed intervention, which was to result in the killing of more than two thousand Haitians, was necessary before the customs control policy could be forced through. After our intervention, the United States created a friendly president, but on the question of customs control he turned out to be too slow for us. The occupation authorities threatened that if he did not sign the treaty a military government would be set up until "honest elections" could be held. Financial assistance to the Haitian government and the payment of back salaries to senators was promised when the treaty should be approved. Finally, Admiral Caperton, on instructions from Washington, told the Haitian cabinet that he was glad to say that all classes demanded the ratification of the treaty and that it would be ratified, but that, if it were not ratified, the United States would proceed to the immediate pacification of the country by military force.

Many good things have been done in connection with the Haitian occupation. No one can dispute it. But I will leave it to you to judge if it is wise to force philanthropy upon a people over the dead bodies of several thousand natives, particularly when there is such a wonderful opportunity for altruism here at home. And, in fact, charity has played a very small part. With regard to the motives in these situations, we may say that there has abided a swollen Monroe Doctrine, dollar diplomacy, and charity, these three, but the least of these has been charity.

In conclusion, we should sweep out of our minds any mystical notions about the inherent righteousness of armed interventions or about the philanthropical reasons for them. These matters are practical matters and should be judged by their results to the people of the United States on a long-time basis in connection with our general foreign policy. The United States turned its back upon the use of force when in the Pact of Paris it renounced war as an instrument of national policy. Undoubtedly in the relations of the United States to the world at large a policy of peace is most economic. This nation has a larger financial stake in world peace than has any other country. It may be that in some cases of intervention against a weaker country the use of force, as judged by immediate results, is still profitable. Will not such an intervention, however, greatly impair the influence of the United States in other and commercially far more important sections of the world? If we continue to send troops into Central America how can we consistently remonstrate with Japan for doing the same thing in Manchuria. It would seem to be wiser for this country, guided by its own best interests, to seek the methods of peaceful in-

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ternational action in the adjustment of disputes on a co-operative basis with Latin America.

LAWRENCE DENNIS.—From the papers just read I have learned that the post-war investments of the United States in Latin America have been unwise and that the bankers, investors, and borrowers are responsible for the unfortunate mistakes made. I had always suspected as much. In these papers two groups of problems seem to require separate analysis; namely, capital exports, as credit and trade phenomena, and the merchandizing of securities as a banking function. With regard to national policy, both speakers seem to feel "that there should be no hesitation about preferring intervention to abandonment of legitimate rights and interests." All I have to say about this highly orthodox feeling is that it has animated every nation going to war in modern times.

Now with regard to capital exports, it would have greatly simplified matters had the speakers stated clearly at the outset that they considered capital exports from the United States to Latin America necessary since the war and had they marshalled their reasons for such a belief. Then they might have shown us just how bankers, investors, and borrowers, in the given situation and state of human nature, could have made the capital exports the speakers deemed necessary without producing the evils described.

Let me run over the capital exports problem of Latin America at the close of the war as it appears to me and as it has not been outlined in the papers just read. The war left the Latin American countries gorged with gold and gold credits as a result of selling at inflated gold prices, exports produced at costs which had not risen correspondingly. A prompt restoration of the gold standard was indicated. For this step, no countries were ever in a stronger position. Considerable gold exports might have followed, due to the necessity of paying investment income to Europeans and because of a desire for some indulgence in foreign imports foregone during the war. Gold exports would have imposed a deflation of internal bank credit and tended to equalize the international distribution of gold. Commercial inventories would have been reduced at marked down prices. Bankruptcies, as in the United States in the deflation of commodity prices of 1920, would have been numerous—more numerous than they were in South America during the same period. Internal prices would have adjusted themselves rapidly to the declining price levels of the gold standard countries. Exchange stability would have been maintained. Hectic real estate booms would have been aborted. Public and private expenditures would have been more modest. At the same time there would have been ample gold to sustain new internal credit expansion for the financing of all appropriate construction, including government public works. Expansion of the plants for producing raw materials could not, however, have been financed and in this fact resides the major argument in favor of such a gold and credit policy immediately after the war.

The course of hypothetical events just outlined, however, would have required a fairly prompt resumption by European investors of their pre-war practise of reinvesting most of their capital income from this quarter. Two obstacles prevented a return to pre-war normality; namely, the post-war debt

policy of Washington and the aspirations of Wall Street to replace Lombard Street as an international long-term capital market. In parentheses, I shall here remark, but not attempt to prove in my ten minutes, that our statesmen and bankers have not only smashed Lombard Street, but also broken up forever the old capital exports game, and, possibly, before it is all over, a great many more economic institutions. To continue with the story, it may be said that the South American governments sterilized their gold in their central banks or currency institutions and progressively from 1920 to 1929 inflated internal bank credit. Consequently, the Chilean Government had to borrow American dollars, for the purpose of building schools, balancing budgets, buying British gunboats, or paying salaries to postmen, as you may care to explain it—all in order that there might be made available in England enough dollars to enable Englishmen to discharge war debts to America and also to pay for a surplus of American imports. American loans have thus kept suspended the gold standard in South America.

Foreign investments feed dollars into an international pool which is also replenished by payments for our imports. From this pool are extracted dollars to pay for American exports and to cancel debts to Americans. As I am neither a Calvinist nor an economist, I have never grasped the importance that is commonly supposed to attach to the exact spot at which dollars are poured into this reservoir.

The triangular movement of American investment funds, through Latin America and Europe back to New York, balanced the international payments of Europe and unbalanced the production of South America as well as the international trade of the world. South Americans are the victims of an unhealthy internal credit structure, of an impossible integration of the internal factors of production, and of price declines caused by overproduction of their principal exports. The world at large suffers the consequences of a prolonged and wholesale falsification of commodity prices and credit values. Price declines due to credit financed overproduction have crippled the purchasing power of South Americans for the manufactures of Europe and America. It should be recalled that our post-war imports from South America have constantly exceeded by about 20 per cent our exports to that region. I find, in the papers just read, no adequate interpretation of the factors I have briefly outlined.

I have two challenges for the speakers and economists in general. First, I challenge them to show how in the present integration of world economy a satisfactory state of trade can be maintained on the basis of an exchange of South American raw materials for canceled coupons of South American bonds held by American or European investors. Second, I challenge them to show how the practice of relending interest to avoid the exchange of goods for paper can be prolonged over any considerable period of time without recurrent collapses of credit and wholesale cancellations of debt such as we now have in progress. I wonder whether economists nowadays ever read Robert Hamilton's reply to Dr. Price on the play of compound interest? I further express the hope that I may live long enough to hear one American economist

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discuss adequately capital exports in terms of their effects on the price level and in terms of the effects of falling prices on money debts.

During about eighty out of the hundred and twenty years from Napoleon to Hoover prices have had a secular trend downwards. From Versailles to date, as from Waterloo to the gold rushes, prices have had this trend. I come all the way from New York to learn that borrowers, during a period of falling commodity prices, have been unwise and unfortunate. But this is not news. It would have been news had the speakers explained how an average long-term borrower can help being unwise and unfortunate during a period of falling prices. It would also have been news had the speakers shown how prolonged uses of credit for specialized production such as six billions of capital exports to Latin America in a decade, can ever fail to culminate in catastrophic price declines.

It would have been enlightening to have been told either how we can, in the modern world, get on with capital exports or proceed without them. It is my feeling that capital exports are anachronisms in the present world, now that there are no more frontier countries, now that the industrial revolution is over, now that *laissez faire* is dead, and now that free trade is as extinct as the Holy Roman Empire. In a world of closed economies, nations in all stages of economic development must pay as they grow.

Now as for the merchandizing aspect of security financing, Dr. Cumberland talks about the bankers having been "represented by incompetent agents." I contend that the agents who negotiated the bad loans were highly competent because they got what their principals sent them after. I was in South America for over a year in 1928 and 1929. I was not competent because I negotiated no loans. I told my employers from the start that all their South American loans had to go into default within five years and proved this assertion to my own, though not to their, satisfaction.

I heard the president of the reserve bank of a South American country, on a visit in the city of New York, tell a group of bankers that the contemplated loans to his country should be cut in half and that, even so, they would be excessive. Needless to say, his opinions carried no more conviction than my own. I traveled all over Peru, Bolivia, Chile, and both the Argentine and Uruguay. Everywhere I found everyone with whom I talked on the subject who was not a blind partisan of the government amazed and indignant at the excesses of the American bankers and the grafting politicians with whom they were co-operating. Decent South Americans were, naturally, as ineffective as decent New Yorkers against local grafters.

Dr. Cumberland's use of the term "fiduciary" in connection with the sale of investments is based neither on law nor on reality. Bankers are merchants of credit and securities who sell on a *caveat emptor* basis. The bankers deceived their customers with half truths, prepared in New York by our ablest lawyers and economists who cabled the agents of the bankers in South America for just the data required by these social scientists for the purpose of deceiving the American public within the law. The bankers rigged the market prior to the offering of South American bonds. The expenses and losses of

these market operations were taken out of the money contributed by the victims of such interferences with a free market. In England such operations are legal frauds.¹ In America such operations are not at present legal frauds, though they might be deemed by some courts as equitable frauds if a case were properly presented.

With regard to Dr. Cumberland's suggestion of a private finance clinic to pass on security issues, I advance the following objections:

First, there can be no criteria of scientific validity for the appraisal of securities, other than standards eliminating deceit and fraud. Practising the art of investment is a venture in profit-seeking. Dr. Cumberland says, "American lenders should look to security for their funds and disregard other considerations." But how can they disregard the promised interest rate? And what, pray, is "security for their funds"? As I am not an economist, I do not know. What significance have the criteria for evaluating credit factors mentioned by Dr. Cumberland if one cannot predict the future behavior of prices?

Second, there is no science of predicting the economic future. Therefore, I maintain neither gypsies nor economists should be allowed to sell guesses about the future, as Dr. Cumberland's advisory board would do.

Third, it is the function of government to protect investors against deceit and fraud whether by lies or half-truths. It is the function of capitalists to do their own guessing about the future.

Society must be governed by laws adapted to its mechanisms and not by unrealistic wishes belonging to a world of dreams.

¹ *Scott v. Brown*, 2 Q.B. 1892-724. For further cases see *Livermore v. Bushnell*, 5 Hun (N.Y.) 85; *Queen v. Aspinwall*, L.R. 2 QBD 48 (1876); *Sampson v. Shaw*, 101 Mass 145 (1869); *People v. Ferris* (unreported); *People v. Federated Radio Corp.*, 244 N.Y. 33 (1926).

SESSION ON RECENT CHANGES IN BANKING

RECENT CHANGES IN THE CHARACTER OF BANK LIABILITIES AND THE PROBLEM OF BANK RESERVES

By JAMES WASHINGTON BELL
Northwestern University

The most apparent recent changes in banking, certainly those uppermost in the minds of the banking public and of the newspaper readers, are bank failures and bank mergers. During the past decade (1921-31) a total of over 7,000 banks were reported as having been closed, either temporarily or permanently, on account of financial difficulties. Some 800 to 900 of these have since reopened, leaving more than 6,000 net failures, with deposits of over two billion dollars. Bank mergers are a part of the centralization movement of industry which has been taking place in this country since the beginning of the present century, though the pace has been quickened since the War (1919). Prior to the crisis of 1929 the reasons for mergers, except for smaller banks in frozen condition, were largely associated with forces prompting consolidation of banks for the purpose of carrying on broader and larger banking service. During the past two years, however, the bulk of bank mergers, in metropolitan districts as well as elsewhere, have probably been prompted by distress conditions, due first to internal and later to external conditions. As President Hoover pointed out in his Message to Congress, December 8, "a large part of these failures has been caused by withdrawals for hoarding, as distinguished from the failures early in the depression, where weaknesses due to mismanagement were the larger cause of failure."

Current failures and mergers or consolidations are, therefore, based upon common causes. The immediate cause is a lack of liquidity. The bank is unable to meet its liabilities either because it has tied up its resources in nonliquid form, or because miscalculations have been made with regard to cash and credit demands. The result has been the suspension of payments, or the seeking of help from institutions which have maintained a stronger, i.e., more liquid, position. The situation, when too bad to solve by independent action, has often led to a change of management and organization.

The dual problem of failures and mergers may thus be approached from two angles: mistakes in management either in the amount and character of obligations or liabilities assumed, or in the method of employing the resources so obtained.

Much has been written about the bank's assets. The commonplace answer to the question of why so many banks have failed lately is the shrinkage in the value of earning assets and their frozen condition, due

chiefly to loans and investments of the security and real estate varieties. But it seems to me that a subject which has not been given its due attention is the analysis of the character of the bank's liabilities in relation to reserves, i.e., primary reserves and other assets which perform or serve the reserve function.

The great bulk of the commercial bank's obligations are the deposit liabilities, and it is the character of these which largely determine (or should determine) the utilization or employment of the bank's resources. If these were better understood it would be easier to make sound judgments in the matter of providing reserves and building up the bank's portfolio. The problem of conversion of funds used to be simple when the character of liabilities was uniform and homogeneous, but today it has become more complex and hence warrants more scientific treatment. It is the purpose of this paper to review the more important and significant changes which have taken place with regard to the bearing which deposit liabilities and reserves may have on the problems of bank failures and mergers, and on sounder bank practice. A further purpose is to examine some recent proposals for bank reform, and in particular, provisions of an official report¹, which if adopted would provide an automatic check on overexpansion of individual bank credit, or at least provide a curb such as does not seem to be present under existing reserve requirements.

History of deposit liabilities and reserve requirements. Until about the middle of the last century the most important form of bank credit or debt (used in the sense of depositors' or borrowers' credit at banks, i.e., bank liability) was the bank note. Indeed, the note issue function was the characteristic function used to identify the banking business. With the development and growth of the use of checks, however, current or cash deposit accounts became more important, and reserve provisions, which had formerly applied to notes and deposits alike, came to be considered a problem in the case of deposits alone; that is, in so far as the ordinary commercial bank is concerned. In our country this separation of treatment occurred in 1887 when the amendment to the National Banking Act made specific provision for a 5 per cent redemption fund to keep the bond-secured national bank notes at parity, and applied the so-called "reserve provisions" to deposits.

Furthermore, deposits under the National Banking system were considered as all of one category (gross deposits) and only a very rough classification of banks was provided, based on their location in financial centers and elsewhere, to allow for the difference in the character of these liabilities and the relative need of their redemption or withdrawal.

Under the provisions of the Federal Reserve Act the same classification

¹ Report of the Committee on Member Bank Reserves of the Federal Reserve System, November, 1931.

of cities was retained, but a distinction was made between demand and time deposits, and different reserve ratios were applied to each. Percentages were reduced, and by the Act of 1917 legal reserves were mobilized and centralized in the Federal Reserve banks, and the present familiar reserve figures were adopted.

Theoretical analysis of reserve requirements and the question of bank liquidity. Due to the fact that disagreement still exists with regard to questions on why reserves need to be kept by commercial banks, how much and in what form, it seems necessary to preface the examination of the operation of our present reserve requirements and proposed changes with a brief theoretical discussion of these matters.

Banks must keep two types of reserves: vault cash and balances with correspondents to meet ordinary cash demands, and cash or credit for the maintenance or guarantee of confidence in the bank's credit. It is not always possible to separate reserves into these two categories, but custom or law has established a more or less fixed ratio of reserves in relation to deposits, which has in practice come to be interpreted as adequate in maintaining the depositors' "morale" or confidence in the solvent condition of the bank. With regard to working reserve, banks keep little more than is actually required in the course of their current operations, relying on other institutions for help in time of credit strain and emergency.

It is not surprising that banks should nearly always lend "up to the hilt," since "excessive" reserves impair profits and hence the stockholders' interest, and deficient reserves violate legal requirements and impair people's confidence in the solvency of the bank's credit, and may cause a run on the bank.

The practice of each individual bank lending to the limit permitted by its reserve requirements has worked successfully during periods of sound business conditions, but in times of stress, when all banks found themselves in the same extended position, cash resources were not available to meet the critical demands since the legal requirements could not be impaired. The only recourse which banks had under the circumstances was to suspend payments. The necessity of an institution not founded on a profit-making objective, but for the purpose of conserving resources to be made available in such cases, really accounts for the establishment of the Federal Reserve banks. Under this system legal reserve requirements took on a new function; they became a contribution to the resources of the Federal Reserve banks, and the balances kept at these institutions became the price which member banks had to pay for a steady and dependable market for their eligible paper. Eligible paper thus became as good as gold, and as "secondary reserve" made primary reserves usable. The reduction in the reserve requirements was warranted by the fact that mobilization of

reserves made them usable and much more effective than when these were scattered and subject to multiple control.

Theoretical analysis of deposit liabilities. Deposit liabilities determine the degree of liquidity which the bank assets must have for the bank to remain solvent, and also determine the degree to which credit may, with safety, be expanded. Solvency may be maintained in either of two ways: by regulating reserves and other assets with regard to the amount and character of deposits, or by the bank assuming deposit liabilities corresponding to its ability to meet such claims. In practice these cannot be considered separately since they are two aspects of the same problem, but for purposes of analysis they may be considered as alternative methods. If the banker could know accurately when actual cash demands would be made and in what amounts, one of his greatest risks or uncertainties could be eliminated. So far as some of his liabilities are concerned (e.g., capital funds, reserves for dividends, taxes, etc., and borrowings), he knows his commitments, but with regard to others (e.g., deposits), he must depend upon practical experience, rule of thumb methods (e.g., 20 per cent deposit balance requirements), or upon more refined analysis, to learn of the likely or probable demands of his customers. This phase of the problem has been given less attention than have bank assets and further treatment of deposits, therefore, seems warranted.

Concretely the question of liquidity may be stated as follows. What does the banker know about his status before he begins operations at the beginning of the business day? Which of the following items can be exactly forecast with regard to changes if no new business is undertaken:

| | | | |
|------------------------------------|-----|-------------------------------|-----|
| Cash | No | Capital and surplus, etc..... | Yes |
| Loans | No | Acceptance liabilities | Yes |
| Investments | Yes | Deposits | No |
| Customers' acceptance liabilities. | Yes | Bills payable | Yes |

He knows the amount of capital funds in the business and his liabilities on acceptance accounts and his borrowings, and he knows his investments in bills and securities, etc. He knows on the basis of previous operations what loans are due today, but since they may be prepaid or renewed this item is subject to change, and with it the items "cash" and "deposits." Neither does he know whether deposit liabilities will be drawn down or built up, nor whether cash will be increased or withdrawn as a result of previous loan operation, cash lodgments, or of other forces. If, however, he can by analysis determine the character of deposits so as to be able to forecast the probable need for cash, this relationship will be established, and he can solve his loan and investment problems much more accurately.

While developed for different purposes the following classifications may serve to throw light on the character of the chief class of bank obligations.

These classifications will be treated seriatim:

I. This general economic classification has no particular bearing on our problem since special and safety deposits do not involve the question of reserve and has been included merely for purposes of comprehensiveness. Our interest lies solely in general deposits.

II. The separation of deposits into demand and time was initiated in the Federal Reserve Act, and though the distinction is based upon logical differences in the activity of the two types of deposits and the corresponding need of reserves, it has become much blurred in practice due to the character of time deposits.

For example, a further analysis of time deposits discloses three subdivisions, viz.: the more or less permanent accumulation of personal re-

CLASSIFICATION OF BANK DEPOSITS ACCORDING TO TYPES

| I Economic | II Federal Reserve Act | III C. A. Phillips | IV J. M. Keynes | V Comptroller of Currency | VI and VII Individual Bank Analysis | |
|-------------------|---------------------------------|--------------------------|-----------------------|--|---|-----------------|
| | | | | | Industry, Business or Occupation | Size |
| General | Time | Primary | Savings income | Individual (in- cluding corporation) | Farmer Manufacturer Merchant Security broker Transportation and shipping Professional | Small |
| | Demand | Derivative | Business | Bank Government (or public) | | Medium Large |
| Special Safety | | | | | | |

serves, or savings deposits par excellence; sums temporarily accumulated by customers pending future permanent investment; and idle business funds not currently needed in the business of the owners.

The significance of this subclassification is that it shows the unlike character of the component parts of this single category, and hence the economic difficulty of legal definition of time deposits for purposes of reserve requirements. In periods of stable business conditions these accounts are less active than demand deposits, hence a lower reserve proportion is justified, but during periods of transition they tend to shift markedly in their activity and character and the classification becomes inaccurate.

In times of depression savings are drawn upon to mitigate personal hardships arising from decreased incomes, and for self-protection in case of bank "runs"; temporary accumulations may be partly drawn upon, but these may also be increased pending clearer indications of the form and direction which investments should take; and idle balances also tend to grow since business operations are curtailed. If business recovery is presaged by relative attractiveness of long-term investments, temporary

savings are drawn down, and as business picks up, demands for accommodation cause bank credit expansion, chiefly in the form of demand deposits, and may result in a transfer of idle business funds to demand deposits.

III. The analysis of primary and derivative deposits, as made by C. A. Phillips, is based upon the difference of purpose in establishing deposit credit, but is significant in that it throws light upon the stability or activity of the accounts. The assumption made is that primary deposits are lodgments of cash or their equivalent, either as savings or as service accounts, whereas, derivative deposits, as their name suggests, are derived from credit operations. The classification roughly parallels the time and demand classification, and the same qualifications must be made with respect to the heterogeneous character of primary deposits and of their alleged stability.

IV. J. M. Keynes has analyzed bank deposits under the suggestive three-fold division of savings, income, and business deposits. In this classification, savings and income parallel primary deposits (column III), but include part of both time and demand deposits (column II), whereas business deposits are chiefly derivative and demand. This classification has the merit of characterizing the chief types of commercial banking business; viz., service accounts and business or commercial credit accounts.

The individual income and savings accounts typify the first kind of banking function. Regular deposits and withdrawals are made when salaries or wages are paid (or when goods are sold), and are checked out to meet current expenses, any excess remaining being placed in savings accounts until the accumulation is sufficient to invest. Such business is regular in times of business stability and need cause the bank no great difficulties or danger; there is actually little need for reserve, since deposits and withdrawals practically compensate each other. Only in times of uncertainty does the bank need extra large reserves.

Business or commercial accounts involve the creation of bank credit. They result from borrowings by corporate and other enterprises which are negotiated through an exchange of business paper for bank credit. (*Vide* Phillips' derivative deposits.) The bank's reserve problem is largely concerned with these, since business accounts are fluctuating and active, highly sensitive to slight changes in business conditions and in public confidence. Borrowings are used to finance both expansion of operations when prospects appear to be favorable and for the purpose of preventing loss or protecting business solvency in times of distress. Cash reserves are needed to meet increased hand-to-hand demands when business is active, and may be needed also to satisfy propensities for hoarding when confidence in credit becomes impaired. It is against such contingencies that banks must provide reserves, and if credit has become inflated its reserve position may be sorely tested.

Unfortunately bank statistics are not adequate in giving expression to the quantitative relations involved either in Keynes' or Phillips' groupings.

V. The reports of the comptroller of the currency call for a division of gross deposits into individual, which includes corporate, government or public, and bank. This classification has practical uses since business, bank, or public demands may show individual and peculiar variations.² It would be more valuable, however, if personal and corporation deposits were separated, and if all individual deposits could be divided into classifications indicating the use or purpose of the accounts.

VI and VII. With regard to the individual bank's own analysis, deposit liabilities based on the size of accounts, and on industrial, occupational, or geographical grouping is particularly valuable in determining factors of profit and safety. A few large accounts acting in concert might jeopardize the bank's liquid condition. At the other extreme, a great bulk of small accounts may be diversified and safe so far as withdrawals are concerned, but may be profitless, or even involve the bank in loss, unless service charges are made. With regard to diversification of accounts on the basis of businesses served, it is as dangerous for the bank to confine its service to one industry as for a farmer to venture all his resources on one crop.

The general purpose of such quantitative and qualitative analyses of the deposit liabilities described is to separate into groups those types of liabilities which have like characteristics. Points of chief interest to bankers are: classification of accounts of depositors or customers likely to be variable, uncertain, and active; sufficiently diversified accounts to permit one class of uncertainties to offset or counterbalance uncertainties in other classes (see columns V and VI); and the size of the accounts, especially if large demand accounts happen to represent fluctuating industries (column VII). Legal classifications (columns II and V) do not show the banker what he needs to know. Other classifications, such as are suggested by Phillips, Keynes, and the bank account analyses, promise results as a basis for formulating sound loan and investment policies.

A general qualification should be made with respect to the above classifications. No arbitrary line can be drawn between the stable and unstable accounts, nor even perhaps between active and inactive accounts. Such a line becomes blurred in practice even when carefully defined by law (e.g., time and demand deposits) or when developed through custom (e.g., savings and commercial accounts). In other words, the application of such an analysis and classification is definite only during stable conditions. In times of emergency a reclassification becomes necessary since, for example, those accounts considered most stable (proceeds of which

² A qualitative and quantitative analysis of deposit liabilities might have forestalled the embarrassment faced by the Foreman-State Bank of Chicago in June, 1931.

have been invested in slow assets) may be the first ones to be withdrawn. It is not always the accounts that are usually regular which can be counted upon to continue this regularity.

While such an analysis as this may not always prove adequate as a basis for the conversion of bank resources, because emergencies do arise, it may nevertheless be maintained that it serves as a more adequate guide to loan and investment policies than no analysis at all, and, if universally adopted, it might have exercised some influence in forestalling banking crises, or at least have mitigated their consequences.

Secondary reserves. The thought developed in the preceding section is that the reserve needed by a bank is a function of the variability in the volume and activity of its liabilities, and of the general liquidity of its assets. Since stockholders' claims are fixed, so long as the bank is a going concern, no liquid assets need be kept against this class of liability, but deposit liabilities are heterogeneous in character and often variable in amount and activity. Therefore, against these the bank must hold appropriate assets so as to be able to meet demands when they are due. It is maintained that cash is merely the most liquid asset which the bank possesses and that the whole hierarchy of assets may be arranged in the order of their liquidity. Cash is, however, the only asset which under all conditions satisfies customers' claims. Bank balances are held elsewhere to provide funds where needed, and to satisfy legal reserve requirements. Together with vault cash, these constitute the bank's working reserves and under ordinary circumstances they should suffice to take care of all cash demands.

In times of extraordinary demands, however, with reserves "fixed" by law and custom, the burden of bank liquidity is shifted from primary reserves to other assets which can be quickly converted into cash, and it is here that we find the most important clues of the bank's ability to meet requirements of contingent demands. Indeed, if adequate facilities exist for liquidating these so-called "secondary reserves," the need for primary reserves varies inversely with the strength of these accounts, i.e., with large secondary reserves, primary reserves may safely be reduced, but the latter need be strong indeed with few or no secondary reserves.

This point may be illustrated by the table on the following page which shows the older practice of how banks varied their reserves during periods of good business and bad, and how the adjustment must be made today in order to maintain liquidity.

With regard to the forms of bank earning assets, there are, roughly speaking, three categories from which to choose: open market loans (bills, commercial paper, and call loans), investments (government and other), and advances to customers. Since, as a rule, there is involved in these an inverse relationship between profit and liquidity, bankers are faced with

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ADJUSTMENT OF BANK RESOURCES TO MAINTAIN LIQUID CONDITION

| | Credit Conditions | | |
|--------------------------------------|-------------------|-----|---|
| | Good | Bad | |
| Variable reserve ratio..... | 10 | 15 | where bank is dependent upon its own operations |
| Fixed legal and actual reserves..... | 10 | 10 | |
| Earning assets: | | | where special facilities exist for ready liquidation of secondary reserve |
| Secondary reserves..... | 40 | 60 | |
| Investments and slow loans..... | 60 | 40 | |

a constant necessity of weighing one factor against another, and the proportions between these three categories undergo wide fluctuations as the factors of liquidity and profit become dominant or recessive in their relative influence.

FACTORS INVOLVED IN CHOICE OF BANK EARNING ASSETS

| | Business Conditions | |
|----------------------------|--|---|
| | Danger | Safety |
| | Speculation Securities sold at loss Loans frozen or slow | Sound business Securities marketable Loans self-liquidating |
| | Order of Liquidity | Order of Profitability |
| Open market loans..... | 1 | 3 |
| Investments..... | 2 | 2 |
| Advances to customers..... | 3 | 1 |

Within recent years standards of bank practice have been developed around that part of the bank's earning assets designated as "secondary reserves." It is stated that a bank is as liquid as are its secondary reserves, and efforts are made to define these qualitatively and quantitatively. Qualitatively they consist of any asset which can in practice be readily (immediately) converted into cash without substantial loss through shrinkage. Falling in this class are (as usually enumerated) eligible paper, prime commercial paper, short-term government securities, bonds, notes, and certificates, and AAA listed securities. Quantitatively, amounts are related to deposits even to the extent of determining separate ratios for each major class; for instance, if legal primary reserves against demand and time deposits are 10 per cent and 3 per cent, secondary reserves should be, say, 25 per cent and 15 per cent.

A conventionalized set-up such as the one on the next page may serve to illustrate the relationship of assets to liabilities.

A word of caution is required with regard to the use of these formulae. In the first place, the line of demarcation between secondary reserve and other assets is arbitrary and relative, and though a well-managed bank should separate these accounts, even though the two may overlap considerably, it should be realized that assets which may be considered liquid

| | | |
|--|-------------|------------------|
| <i>Assets:</i> | | |
| Fixed—Building, etc. | | |
| Federal Reserve bank stock..... | 5* | |
| Loans and other investments..... | 37 | } Earning assets |
| Secondary reserve..... | 40 | |
| Cash reserve (including float)..... | 18* | |
| | <u>100%</u> | |
| <i>Liabilities:</i> | | |
| Deposits—Demand..... | 50 | } Credit |
| Time..... | 35 | |
| Capital stock, surplus, and undivided profits..... | 15 | } Equity |
| | <u>100%</u> | |

* Little or no earnings.

at one time may be slow or frozen under changed conditions. The adjustment of internal bank policies to cyclical, irregular, or sporadic fluctuations, or even secular changes, is not sufficiently understood to warrant more than arbitrary standards. It is gratuitous to state that conservative practice would exclude all assets not thoroughly gilt-edge, even in times of crisis, since it is at these times when liquidation is required.

In the second place, the adjustment of assets is an individual bank problem into which many variables enter, e.g., the location of the bank, the composition and character of its liabilities, capital funds, local demands for credit, familiarity, and traditional practice with regard to specialized loans and investments.

Operation of reserve requirements, 1914-31. In the light of the above theoretical analysis we may proceed with the examination of the operation of reserve requirements during the period 1914-31.

The following table presents, in summary form, the legal require-

CHANGES IN LEGAL RESERVE REQUIREMENTS

| | National Banks prior to Federal Reserve Act | | | 1914-17* | Federal Reserve Member Banks 1917 | | | |
|-------------------------|---|---------|---------------------------------|----------|-----------------------------------|------|---------|-------------------------|
| Classification of Banks | Total reserve required vs. total net depts. | At home | At home or on deposit elsewhere | | Reserves against | | At home | At Federal Reserve Bank |
| | | | | | Net deposits | Time | | |
| Central Reserve city | 25% | all | none | | 13% | 3% | none | all |
| Reserve city..... | 25% | 1 | 1 | | 10% | 3% | none | all |
| Country..... | 15% | 1 | 1 | | 7% | 3% | none | all |

* Transition period when reduction in ratios was gradually effected and location of reserves changed.

Calculation of net deposits subject to reserve has varied from time to time. At present they include total demand deposits of individuals, corporations, etc., plus the excess, if any, of demand deposits due other banks over items in process of collection and funds on deposit with other banks. United States government deposits have been exempted from reserve requirements since 1917.

Vault cash eligible for reserve excluded national bank notes, federal reserve notes and federal reserve bank notes prior to 1917. Since 1917 no vault cash has been eligible as reserve.

ments for national banks before the Federal Reserve Act and for member banks thereafter (as ultimately determined by 1917).

Operating effects of changes in reserve requirements. The effects of legal changes in reserve requirements since 1914 have been: to reduce effective reserves; to mobilize and concentrate legal reserves in the reserve banks; and to effect a distinction between time and demand deposits.

TABLE I
STATISTICS OF ALL MEMBER BANKS, 1914-31, IN REGARD TO RESERVES,
DEPOSITS, AND EARNING ASSETS AS OF DECEMBER 31*
(Expressed in dollars—00,000,000 omitted)

| | 1914 | 1917 | 1920 | 1928 | 1929 | 1930 | 1931 |
|---|-------|-------|-------|-------|---------------------|------|--------|
| <i>I. Reserves</i> | | | | | | | (9/29) |
| 1. At F.R. banks (legal)..... | .2 | 1.4 | 1.7 | 2.4 | 2.3 | 2.4 | 2.3 |
| 2. Vault..... | .6 | .7† | .6 | .5 | .5 | .5 | .5 |
| 3. Due from other banks..... | 1.1 | 2.1 | 1.5 | 2.1 | 2.1 | 2.4 | 1.9 |
| 4. Total working reserve funds..... | 2.0 | | | | | 5.5 | 4.7 |
| <i>II. Deposits</i> | | | | | | | |
| 5. TOTAL..... | 8.3 | 18.6 | 24.2 | 39.0 | 38.0 | 37.1 | 33.4 |
| 6. Demand..... | 5.1 | 11.1 | 14.6 | 21.1 | 20.4 | 18.7 | 17.5‡ |
| 7. Time..... | 1.2 | 3.1 | 6.1 | 13.4 | 13.2 | 13.5 | 12.9‡ |
| 8. U. S. Government..... | .07 | .6 | .3 | .2 | .1 | .2 | — |
| 9. Due to banks..... | 1.8 | 3.6 | 3.0 | 4.2 | 4.1 | 4.5 | — |
| 10. Total net deposits subject to reserve requirements..... | 7.4 | 15.6 | 21.5 | 33.3 | 33.0 | 32.5 | 30.5‡ |
| 11. Bills payable and rediscounts..... | .1 | .7 | 3.0 | 1.1 | .8 | .3 | .4 |
| <i>III. Earning Assets</i> | | | | | | | |
| 12. TOTAL..... | 8.5 | 16.9 | 25.5 | 35.8 | 35.9 | 34.8 | 33.0 |
| 13. Loans**..... | 6.4 | 12.3 | 19.5 | 25.1 | 26.1 | 23.8 | 20.9 |
| 14. Total investments..... | 2.0 | 4.5 | 5.9 | 10.5 | 9.7 | 10.9 | 12.1 |
| 15. U. S. securities..... | .7 | 1.7 | 2.6 | 4.3 | 3.8 | 4.1 | 5.5 |
| 16. Other securities..... | 1.3 | 2.8 | 3.3 | 6.2 | 5.9 | 6.8 | 6.6 |
| 17. Eligible assets (earlier figures not available)..... | — | — | — | — | 7.6 | 7.0 | 7.9 |
| 18. Total loans secured by stocks and bonds..... | — | — | — | 10.1 | 10.5 | 9.7 | 8.0 |
| **13. Loans (analysis of detail) | | | | | (0,000,000 omitted) | | |
| (a) To banks:..... | .53 | .71 | .63 | .59 | | | |
| secured by stocks and bonds..... | — | — | .31 | .31 | | | |
| otherwise secured and unsecured..... | — | — | .31 | .28 | | | |
| (b) To customers:..... | 21.46 | 23.19 | 21.00 | 18.71 | | | |
| secured by stocks and bonds..... | 7.34 | 8.48 | 7.94 | 6.84 | | | |
| secured by real estate..... | 3.12 | 3.19 | 3.13 | 3.14 | | | |
| otherwise secured and unsecured..... | 10.99 | 11.55 | 9.83 | 8.72 | | | |
| (c) Open market loans:..... | 3.15 | 2.24 | 2.23 | 1.56 | | | |
| bills..... | .21 | .29 | .37 | .33 | | | |
| commercial paper..... | .39 | .29 | .36 | .29 | | | |
| street loans..... | 2.55 | 1.66 | 1.49 | .92 | | | |

* The above data are taken from the *Annual Report of the Federal Reserve Board for 1930*, pp. 94-95, except for 1931, which were taken from *Federal Reserve Bulletins* for November, p. 611, and December, pp. 664, 698, and 699.

† June 20, 1917; amount reduced to .5 for December 31.

‡ Average daily for September.

Although reserve requirements were designed to change directly with the deposit liabilities of the member banks, results show that they have neither kept step with regard to the volume of total deposits, nor to their use, or turnover. In fact during the period considered, 1914-31, the lack of adjustment has been shown by an actual relative decrease in reserves, both legal and discretionary, and a lack of current adjustment to fluctuations in the use of bank deposits.

TABLE II
OPERATIONS OF ALL MEMBER BANKS AS REFLECTED BY SELECTED RATIOS, 1914-31
(Year and figures except for 1931)*

| | 1914 | 1917 | 1920 | 1928 | 1929 | 1930 | 1931 |
|---|------|------|------|------|------|------|------|
| <i>I. Reserves</i> | | | | | | | |
| Legal+vault (1+2) | | | | | | | |
| 1. <u>Total net deposits (10)</u> | 13.5 | 14.7 | 11.3 | 8.9 | 8.9 | 9.4 | 9.2 |
| Total working reserve (4) | | | | | | | |
| 2. <u>Total net deposits (10)</u> | 28 | — | — | — | — | 16.1 | 15.4 |
| <i>II. Deposits</i> | | | | | | | |
| Time deposits (7) | | | | | | | |
| 1. <u>Total net deposits (10)</u> | 16.5 | 20.1 | 28.8 | 40.3 | 40.0 | 41.5 | 42.3 |
| <i>III. Earning Assets</i> | | | | | | | |
| Investments (14) | | | | | | | |
| 1. <u>Total earning assets (12)</u> | 24.5 | 27.1 | 23.1 | 29.3 | 27.0 | 31.3 | 37.0 |
| U. S. secs.+O. M. loans (15+13c) | | | | | | | |
| 2. <u>Total earning assets (12)</u> | — | — | — | 20.8 | 16.8 | 18.2 | 21.6 |
| Eligible assets (17) | | | | | | | |
| 3. <u>Total earning assets (12)</u> | — | — | — | — | 21.2 | 20.1 | 24.0 |

* The data used is taken from Table I and the numbers in parentheses refer to items as enumerated.

The reduction in the legal minimum reserves has had no significant effect with regard to liquidity since these can in no case be impaired. (Note experience of national banks in the panic of 1907.) The *Report of the Committee on Member Bank Reserves*³ goes so far as to state that it is not "the purpose of legal requirements for reserves to insure the liquidity of individual member banks, nor that it is possible for legal reserve requirements to accomplish this purpose."

³ Report referred to in the introduction and analyzed in concluding part of this paper.

Figures on vault cash show that member banks have not increased this to compensate for the reduction in legal minimum requirements, as was expected when vault cash was removed from the discretionary reserve in 1917. It was the purpose of this provision to concentrate gold holdings in the reserve banks, and this was accomplished, but it also opened the way for a gradual diminution in actual reserves. Were the previous provisions applied today the member banks would be required to hold some 700 million dollars more than they now hold as vault reserve. (This would have to be borrowed from the Reserve banks and would form the basis for far stronger credit control both by modifying individual bank policy

TABLE III
RATIO OF BANK CAPITAL TO DEPOSITS FOR ALL MEMBER BANKS, 1920-30*
(Expressed in billion dollars)

| Year | Total Deposits | Capital Stock | Total Capital Funds | % Capital Stock to Deposits | % Capital Funds to Deposits |
|------|----------------|---------------|---------------------|-----------------------------|-----------------------------|
| 1931 | 33.4 | 2.5 | 6.3 | 7.6 | 19.0 |
| 1930 | 37.1 | 2.6 | 6.3 | 7.2 | 17.0 |
| 1929 | 38.0 | 2.7 | 6.5 | 6.5 | 17.1 |
| 1928 | 39.0 | 2.4 | 5.7 | 6.3 | 14.7 |
| 1927 | 36.6 | 2.3 | 5.3 | 6.4 | 14.6 |
| 1926 | 34.5 | 2.2 | 4.9 | 6.4 | 14.3 |
| 1925 | 34.2 | 2.1 | 4.6 | 6.1 | 13.9 |
| 1924 | 32.3 | 2.0 | 4.5 | 6.3 | 14.0 |
| 1923 | 28.5 | 2.0 | 4.3 | 7.0 | 15.3 |
| 1922 | 27.2 | 1.9 | 4.3 | 7.0 | 16.0 |
| 1921 | 23.2 | 1.8 | 4.0 | 8.0 | 16.5 |
| 1920 | 24.2 | 1.7 | 4.1 | 7.4 | 17.0 |

* In 1870 capital funds were approximately equal to deposits; at the beginning of the present century capital funds were about 40%; during the war and after they had dropped below 20%; in more recent time the equity of the owners has grown still thinner, until by 1925 the proportions for all member banks were 4.5 billion capital funds to 34.2 total deposits, or 13.9%. Lately, due to consolidations, failures, etc., the proportion of ownership has again slightly increased so that they are now as large as they were a decade ago.

and by providing ammunition for the Reserve banks.) Furthermore the provision removing vault cash from reserve requirements has not worked equitably between banks. The *Report of the Committee on Member Bank Reserves* shows a reduction on the average of vault cash from 3.5 per cent to 1.5 per cent from 1918 to 1930; the reduction being much larger in the case of city banks than in country banks.

The economy of the total working reserves, legal and discretionary, is illustrated by comparing figures of all national banks, 1913 and 1930. In the former year a total of 34 per cent reserves to deposits (consisting of 30.4 per cent due from banks, plus 13.5 per cent vault cash) was reduced in the latter year to 20.7 per cent (consisting of 12.8 per cent due from banks, 2.0 per cent vault cash, and 6.4 per cent in Reserve banks).

From 1914 to 1931 member bank reserves, including vault cash, in-

creased from 1.8 billion to 2.9 billion dollars, whereas total net deposits increased from 7.4 billion to 32 billion dollars, representing a decline in reserve ratio from 13.75 per cent to 9 per cent. While this increase in expansion in credit was based upon huge imports of gold, it was made possible by a progressive reduction in effective requirements for member bank reserves by the provisions of the Federal Reserve Act, but more especially by the amendment of the Act in 1917. According to the computations of the Committee on Member Bank Reserves (page 9) member banks would now be required to hold 13.75 per cent of 32 billion dollars, or 4.4 billion dollars reserves, if the vault cash reserve requirement of the national banks prior to 1914 were still in force. This amounts to 1.5 billion dollars more than they now have. The *Report* also states that

TABLE IV
COMPARISON OF ELIGIBLE PAPER TO TOTAL LOANS, DISCOUNTS, AND
INVESTMENTS OF NATIONAL BANKS
(Expressed in million dollars)
From Comptroller of Currency Reports

| Fis. Yr. Ending June 30 | Total Loans Discounts and Investment | Tot. Elig. Pap. Plus U. S. Securities | % of Total |
|-------------------------------|--|---|---------------|
| 1923 | 16.8 | 6.2 | 37.0 |
| 1924 | 17.1 | 6.0 | 35.1 |
| 1925 | 18.4 | 5.9 | 32.3 |
| 1926 | 19.2 | 5.9 | 30.9 |
| 1927 | 20.3 | 5.9 | 29.3 |
| 1928 | 22.2 | 6.2 | 27.9 |
| 1929 | 21.4 | 5.8 | 27.1 |
| 1930 | 21.8 | 5.5 | 25.1 |

about one-half of the decrease (1.5 billions) reflects the removal of vault cash from required reserves in 1917, while the remainder reflects the lowering of reserve percentages, and the rapid shift from demand to time deposits.

These figures show that in practice banks stick very closely to the minimum requirements established by law and actual operating needs for till money and payments of balances through clearings. The explanation and justification of this practice is found in the improved facilities under the Federal Reserve system for supplying cash and credit to members, if and when accommodation is wanted.

Another factor effecting a reduction of the reserves has been the shift from demand to time deposits. Though the growth in time deposits can in large part be accounted for by an absolute increase in new savings and by an acquisition of this type of business which might otherwise have gone to savings banks, there is evidence to show that reclassification of deposits has been effected so as to evade legal reserve requirements. The *Report on Member Bank Reserves* deals at length with the methods em-

ployed in effecting a reclassification of demand deposits (with their 7 per cent, 10 per cent, and 13 per cent requirements) so as to bring these within the legal definition of time deposits (with 3 per cent reserve requirements). The figures for time deposits show that these have progressively increased from 17 per cent of the total net deposits in 1914 to over 40 per cent in 1931.⁴

Failure of reserves to correspond to activity of deposits. The lowering of reserves in relation to the volume of deposits has been accentuated by the fact that the turnover of deposits has greatly increased since 1914, and especially since 1925 to the year 1930. No account has been taken by the legal provisions of the activity of deposits as such. It was assumed that a classification of banks according to their location in financial centers and in the country, and a distinction between demand and time deposits, would cause reserves to vary in direct relation to the change in character and volume of business demands for credit, an assumption not verified by experience. It is well known that short-time fluctuations in industry, trade, and finance are much more closely correlated with changes in bank debits than with the volume of bank deposits. Statistical studies by Carl Snyder, Warren M. Persons, and others have confirmed this fact. It follows that if reserve requirements are to reflect fundamental changes in the demand for bank credit, account should be taken of the activity of deposit accounts as well as of their volume. The evidence presented in the *Report of Member Bank Reserves* (pp. 9 and 11) on this point is convincing.

This report contains an instructive chart covering the period 1924-30 showing the relationship between member bank reserve balances at the Federal Reserve banks; member bank net deposits, indicating the volume of credit demand; and total debits, representing the turnover or activity of deposit accounts. These curves show legal reserves fluctuating roughly with net deposits, but indicate a very crude and inadequate relationship to total debits or activity of accounts, thus bringing out clearly the failure of member bank balances to reflect fundamental changes in the demand for credit accommodation. For example, a shift in balances from country to city banks in 1924, on account of the inactivity of business in the interior, caused increase in reserve requirements from 7 per cent to 10 per cent or 13 per cent, whereas, with the recovery of business in the interior in the two years following, reserves were withdrawn from cities, thus decreasing the reserve requirements on such withdrawals from 10 per cent and 13 per cent to 7 per cent.

In 1928-29 extraordinary demands for funds in the speculative secur-

⁴For a comparison of growth in time deposits plus savings in savings banks and demand deposits see table in W. R. Burgess' *The Reserve Banks and Money Markets*, p. 37. In effect the figures show that by 1926 savings had regained their "50-50" pre-war relationship.

ity markets were met without any increase in reserve requirements. In fact the legal requirements were about 75 million dollars lower in September, 1929, at the peak of the stock market boom, than in December, 1927, though broker loans increased in this period by over 4 billion dollars, and the heavy demand for funds was further evidenced by rates charged for call loans which reached a monthly average high of 10 per cent. Corporations and other non-banking lenders made huge direct loans to the markets, yet with no perceptible effects on the volume of bank deposits. But the activity in deposit accounts increased with great rapidity, and had this been taken into consideration increased reserve requirements would have acted as a powerful restraint against the unsound credit which was developing at that time. Since the depression reserves have continued relatively high despite the extraordinary decline in total bank debits.

Effect of reserve requirements upon bank assets, 1914-31. Along with changes in bank deposits have occurred corresponding changes in the character and amount of bank assets. These have also been affected by the revisions in reserve requirements. The reduction of reserves needed (together with the increased amount of bank credit based upon gold imports and reserve bank credit) has released resources more than adequate to serve commercial demands of the banks' own customers. The excess has found its way into non-commercial uses, and has also been a factor in prompting commercial banks to diversify their business by undertaking new functions. During this period (1914-31) bankers felt warranted in treating the growing proportion of the total deposits consisting of time or savings accounts (16 per cent to over 40 per cent), together with their proprietorship capital⁵ as semipermanent funds, available for making loans and investments of longer duration and less liquidity than those of a strictly commercial character. A comparison of the quantities "investments plus advances to customers on securities and real estate" and the sum of "capital funds plus time deposits" shows that non-commercial advances have just about kept pace with the increase of semipermanent funds down to 1929, and with the corresponding decrease occurring since. This general statement is substantially correct even though the comparison is subject to certain qualifications, e.g., "street loans" are excluded on the ground that they represent legitimate demands of dealers in securities for short-term working capital; a portion of collateral loans to customers used for commercial purposes should also be excluded; bank building and equipment, etc., should be included because these tie up funds; and on the other hand, time deposits are not all semipermanent in character. On the basis of their commercial and non-commercial business, member banks in the aggregate have been liquid

⁵ See Table III.

throughout the period since their demand liabilities have by and large been matched by their current funds. This condition of liquidity, adequate during a period of confidence, does not necessarily prove so in times of stress, and the position of the bank's "secondary reserves" should be examined as a further test of liquidity. In other words, what proportion of the bank's assets, commercial and non-commercial, are available to meet contingent demands for cash? Highly liquid loans and investments should be separated from assets which are slow or likely to become frozen. The ratios in Table II, i.e., United States securities plus open market loans, and of eligible assets to total earning assets, show that a fifth or more of bank's earning assets are readily convertible into cash or credit either in the open market or at the Reserve banks. Complete figures are available only for the past few years but the trend shown in the table for national banks (Table IV) indicates that secondary reserves did not keep pace with the increase of total earning assets, and that by 1929-30 the low point of secondary reserve strength was reached. The evidence seems clear that bank funds were utilized to an increasing extent in slow and non-commercial purposes.

The degree to which eligible paper was used for the purpose of conversion into primary reserves is shown in the borrowings and rediscounts at the Reserve banks (item 11, Table I). This item has been reduced from 1.1 billion dollars in December, 1929, to about 250 thousand dollars in the summer of 1931. (Since the fall of 1931 there has been an increase.) Compared with 3 billion dollars in 1920 this would seem to indicate great latitude of borrowing capacity, hence a high degree of liquidity. The progressive decline, however, in the proportion of eligible paper since that time, and until 1931, makes one pause at the inference. (See Table IV on National Banks, 1923-30.) In fact many writers during this period expressed apprehension as to the unfavorable significance of this development. Furthermore borrowings and rediscounts are complicated by gold movements. Huge gold imports during this period made member banks less dependent upon reserve bank credit in order to maintain their own liquidity, but it would be hazardous to count upon a continuation of this condition as a source of supply of reserve assets.

Even if we were to admit the satisfactory liquidity of the banking system the failure of several thousand individual banks would be no anomaly. The liquidity of the unit bank is an individual problem, or at most a group problem where common factors bear alike upon all of the members of such a group. Differences exist between banks. Some bankers are conservative, others adventurous; some manage their affairs with a narrow, meticulous, specialized outlook, while others adjust their business to general economic movements and take into account cyclical, secular, and other fluctuations. By and large, bankers have not yet been

fully educated with respect to the importance of eligible assets and secondary reserves. Too many of them still venerate and adhere to the traditional reserve ratio as the final test of liquidity. Yet the last weakness to be shown in the bank's affairs is the impairment of the reserve ratio. Statements of banks just prior to failure never indicate lack of liquidity, if this letter-of-the-law test be applied. The obvious explanation is that when impairment occurs, immediate correction must be made or the bank must cease operations. The failure of practice with regard to secondary reserve provisions makes reliance upon primary reserve regulation necessary. Any effort, therefore, which approaches the problem of bank liquidity from the point of view of affecting the reserve ratio is taking a step in the right direction for reforming our present banking weaknesses.

Proposals to correct the weaknesses of the banking system. Proposals to correct the weaknesses of the banking system are both remedial and preventive. Some plans overtly recognize that we are caught in a paralyzed condition and suggest ways of getting out of the predicament; others are designed to strengthen the machinery so as to prevent a recurrence of the situation.

Among the various remedial measures proposed are those sponsored by the administration (utilizing existing institutions and providing new ones) to thaw out frozen assets of banks and other institutions, re-establish confidence, and thus "liberate working capital" so that it can be put to work. Particularly apropos are the following: the establishment of the National Credit Corporation, set up after the British crisis (October 6, 1931); the system of home loan discount banks (recommended November 14); modification of the Reserve bank eligibility restrictions "during the emergency" without lowering "the standards of the system"; authorization of the Federal Reserve banks to "make available quickly to depositors some portion of their deposits in closed banks, as the assets of such banks may warrant"; and the creation of a Reconstruction Finance Corporation modeled on the former War Finance Corporation, and of mortgage discount banks, to make advances to agricultural credit agencies and to established industrial and financial institutions not served by the National Credit Corporation.*

Other proposals of the preventive character recommend further government financial aid by treasury subscription of additional capital to the Federal Land Banks; measures of enlarging membership in the Federal Reserve system; improvement of banking laws; investigation of the need for separation between different kinds of banking; and an enlargement of branch banking under proper restrictions.

With regard to remedial measures few will deny that some action

* President's Message, December 8, 1931.

should be taken. Many of these proposals have distinct merit, but in administering a remedy care must be taken not to create new weaknesses. I wish to single out for brief consideration the proposal to modify eligibility requirements. Your attention has already been called to progressive decline, down to 1930, in the proportions of eligible paper held by national banks (see Table IV). This condition signifies that these banks were becoming less and less liquid so far as resort to Reserve bank resources were concerned, and that they were depending for liquidity more and more upon the organized markets for securities and real estate mortgage paper. The McFadden Act of 1927 aggravated the condition. The question may well be asked whether or not further liberality and encouragement in legal permission to lend on and invest in securities and real estate paper may not aggravate the situation rather than ameliorate it. The question is raised not because it is believed that some such measures may not be warranted to extract us from the predicament we now find ourselves in, but merely to point out the possibilities of inflation if such measures should become a permanent fixture. The McFadden Act liberalized investment and loan provisions. If Lombard loans had at that time been eligible for discount at the Federal Reserve banks, would not the banks have had even larger assets to shrink in value and thus become frozen, materializing in more embarrassing failures and difficulties, and leading to distress mergers? A saving feature of the proposals to establish such institutions as the National Credit Corporation, the Reconstruction Finance Corporation, and the Home Loan Discount Banks, is that the non-commercial resources of embarrassed institutions may be liquidated without resort to the Federal Reserve banks, and when the need for these facilities ceases these organizations will die a natural death. Efforts to modify eligibility requirements for discountable paper at the Reserve banks should be carefully investigated. Much may be hazarded in weighing down our system of commercial bankers' banks with the burden of financing investment paper. The eligibility of government securities is probably safe in view of the highly developed market for these now in existence, but until the markets for other non-commercial paper become more stable and reliable than they now seem to be, the risk of including them in the category of eligible assets is probably greater than the advantages to be gained.

Analysis of the Report of the Committee on Member Bank Reserves. With regard to preventive measures proposed to correct the weaknesses of our banking system only one will be considered in this paper; viz., the proposals of the Committee on Bank Reserves of the Federal Reserve system which submitted a report in November, 1931, recommending changes in the member bank reserve requirements as now provided for in Section 19 of the Federal Reserve Act and Regulation D of the Fed-

eral Reserve Board. This report is not an outgrowth of present depression conditions, but it has a direct bearing upon the liquidity condition of commercial banks.

I have reserved the Committee's *Report* for consideration at the end of the paper because I believe that the ingenuity of the proposed modification can be better understood and appreciated after the presentation of a theoretical treatment of the problem of bank liquidity and an analysis of the operation of the reserve requirements.

It is the opinion of the Committee that the present system of legal reserve requirements for member bank reserve is not effective, that since its inception in 1914 "it has not operated to relate the expansion of member bank credit to the needs of trade and industry" (which is said to be the chief function of reserves); nor are the requirements equitable and fair "as between individual member banks and groups of member banks and they do not adequately take into account genuine differences in the character of banking in which a member bank may be engaged."

The Committee *Report* contains data supporting its claim that "since 1914 and especially since 1922 the proportion of primary reserves held by member banks has steadily declined in relation to the volume of member bank deposits and to their activity."⁷ This relative decline in reserves, they show, has been due to defects in the definition of reserves, in the method of determining liabilities against which reserves must be carried, and in the classification of banks and of deposits for reserve purposes. These points have been treated above and need not be elaborated upon here.

After making futile efforts to frame provisions designed to correct existing defects through modifications in classification of cities and of deposits subject to reserve (including more stringent definitions of time deposits) the Committee finally resorted to an entirely new approach to the reserve problem.

Instead of attempting a complicated analysis of bank deposit liabilities⁸ defining these with regard to the necessity of reserve protection, the Committee abandons all classifications and provides a simple formula for changing required reserves directly with fluctuations in the volume and activity of deposit accounts.

Specifically the plan proposes the following:

1. Reserves of member banks shall be determined on the basis of total volume of deposits irrespective of the locality of the bank and without distinction between time and demand deposits, and the activity of dollar turnover of deposits.

⁷ See p. 5 of this *Report*.

⁸ The individual bank would nevertheless be interested in the classifications presented above, p. 7, since they indicate diversification of risk factors.

2. That required reserves be computed by the formula: 5 per cent of the actual net deposits held at the close of the preceding day, plus 50 per cent of the average daily debits or charges made to these accounts on the books of the bank during the eight weeks preceding the computation period. In no case shall the total reserve requirements be in excess of 15 per cent of a bank's gross deposits.

3. The definition of reserves includes cash in vault to the extent of not more than one-fifth in the case of banks located in the vicinity of Federal Reserve facilities, and not more than three-fifths in the case of other banks.⁹

4. Deposits are defined as net deposits obtained by deducting from gross deposits balances due from other members, checks in process of collection and other cash items payable upon presentation. United States government deposits (exempt since 1917) shall be subject to reserve requirements like any other deposits.

The provision requiring reserves to vary directly with the volume and velocity of credit demands seems revolutionary, but it has the merit of going right to the root of the matter instead of relying entirely upon indirect and roundabout discount and open market methods of credit control developed empirically by the Federal Reserve system. If member banks are increasing credit without due regard to the requirements of their customers, an increase in the reserve proportions automatically effected by the volume and turnover in the use of credit puts upon the bank the directest possible pressure to curb expansion, and conversely, if credit demands relax, it will have a direct effect on reserve proportions which will prompt the bank to be more liberal with its advances.

The influence of this requirement (flat 5 per cent plus 50 per cent of the average daily turnover, maximum 15 per cent) upon the control of credit is greater than it first appears. For instance (according to the Committee's calculations), when business activity increases a bank's deposit turnover from once a month to once a week, the increase in reserve requirements jumps from 7 per cent to 12 per cent. This is certainly a substantial change. In periods of speculative booms (local or general) such as that in the stock market in 1928-29, or the farm real estate boom in the west, central west, and southern states in 1918-20, and in Florida in 1925-26, city banks and country banks in those localities affected would have had to increase their reserves materially under such conditions, and the very strong restraining influence upon credit expansion would have worked a much more wholesome effect in enforcing sounder banking practice. On the other hand, a reduction in business activities during the ensuing periods of deflation would have automatically

⁹This provision reverts to pre-1917 conditions. A similar proposal was made in the McFadden bill H.R. No. 12453 introduced in May, 1925.

released reserves, with resulting ease in credit conditions. Furthermore, during a business boom with its accompanying activity and expansion of credit, less of the banks' resources would be made available for investment in non-commercial assets, thereby lessening the danger of holding inflated values in the portfolio if a crisis should occur.

Again these proposals have the merit of correcting certain inequitable requirements as between individual and groups or classes of banks. Specifically, by allowing vault cash, within limits, to count as reserves, banks which do not have prompt access to Federal Reserve banks or branches will be put upon an equality with those located in financial centers; reserve requirements will be more equalized by changing the method of calculating net deposits subject to reserve, since country banks which do not hold large deposits of other banks must keep reserves against the greater part of their gross deposits, whereas the great city banks, which hold large deposits from their country correspondents, have a total usually much larger than the deductible items (due to banks and exchanges for clearings); measuring reserves by deposit activity does away with the inequalities of requiring banks with relatively inactive accounts (country and some city) to keep as large or larger reserves than banks with very active accounts, thus throwing the burden where it belongs and, incidentally, placing it upon banks which by reason of their business activity are best able to bear it.

The principle upon which this proposal is based is sound. With regard to the minutiae of its details and the probable success of their application I am in no position to pass judgment. It would probably be subject to some modification as experience proves the necessity of further adaption to prevailing conditions. But the purpose and methods are clear and should be generally understood.

This proposal does not offer a substitute for bank responsibility in regard to credit control. It will not serve as an effective automatic stop to inflation,¹⁰ nor as a self-starter for business recovery. The control by members referred to above will not obviate the necessity of Federal Reserve control by means of the methods they have developed or may yet devise. It will at most make primary reserves reassume but part of the burden of maintaining bank credit stable and liquid. At the same time it will give to the Federal Reserve banks resources (reserve balances) slightly better adjusted to their need of ammunition to manage inflationary booms when they arise.¹¹ Expansion of credit will more sensitively affect reserve requirements, causing banks to borrow at the Federal Reserve banks sooner than under present conditions, thus giving the latter

¹⁰ The provisions closely guard the variations in reserve proportions, fixing a maximum not far from that actually required for many banks at the present time.

¹¹ The report does not propose an aggregate increase in reserves.

more effective control over credit. Thus by operating both upon the credit of member banks and resources of the Reserve banks, and in direct relation to business demands for credit, it would have the probable effect of strengthening the banking machinery in its ability to cope with the problem of credit control.

Summary and Conclusion. In conclusion, the problem of reserve regulation resolves itself into the question of bank liquidity and credit control. Present reserve requirements do not take adequate account of the velocity nor of the multiple and shifting character of deposit liabilities, and bankers have not yet become educated with respect to the importance of adequate eligible paper and other secondary reserves. They still insist upon using the primary reserve ratio as a guide to credit and investment policy. Therefore, a change in reserve requirements which more adequately reflects the volume and turnover of their deposits will serve not only to call their attention to the character of their liabilities but will cause the individual banker to reassume his share of the responsibility in controlling credit expansion.

BANK FAILURES IN THE UNITED STATES

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The available statistical data relative to bank failures in this country present difficult and, in some respects, insoluble problems for any one who wishes to develop complete, rational, and systematic tables that will give an accurate picture of the characteristics of our bank failures. The data at our disposal are of two fundamental kinds: those relating to failures and those relating to suspensions. The most complete series is that of failures published by the office of the comptroller of the currency. Suspensions have been compiled by the Federal Reserve Board for the years since, and including, 1921. Various other organizations, such as Dun and Bradstreet and those which publish the *American Banker* and the *Bankers' Monthly* are making some attempts to compile similar data, but they are in a form which is extremely difficult to manipulate and interpret. As a result, the present analysis rests largely upon the data relating to failures and suspensions as published by the comptroller of the currency and the Federal Reserve Board.

It must be understood that the term "failures" as published by the comptroller of the currency includes banks which are actually found to be insolvent, and embraces only those for which receivers are appointed. This includes those national banks for which receivers are appointed after having been voted into voluntary liquidation under the provisions of Section 5220 of the *United States Revised Statutes*. In other words, it frequently happens that a bank is absorbed by, or consolidated with, another bank without any suspension of business in so far as the depositor is concerned. Notwithstanding this, it may actually have been insolvent and, if so, is classed as a failure by the supervisory banking authorities. The number of failures of banks, other than national, which are published by the comptroller, are received from the various state bank superintendents or commissioners.

The bank suspension figures published by the Federal Reserve Board represent banks closed to the public, either temporarily or permanently, on account of financial difficulties. Some of these banks are reopened later or are taken over by other banks, and in many cases are not ultimately classed as failures. The "reopenings," as published by the Board include the suspended banks which have resumed operations. A resumption of operations may be attended by a change in name and an issuance of a new charter and still be classed as a reopening rather than a primary organization. A reopening resulting from a consolidation of two or more suspended banks is classed as a single reopening. When, however, a suspended national bank reopens as a state bank, or vice versa, the trans-

action is regarded by the Board as a primary organization and not as a reopening.

To add to the analyst's difficulties, the comptroller's data on failures relate to fiscal years whereas the Board's data on suspensions relate to calendar years. If one wishes to bring his figures up to date for the current year he is compelled to use suspensions which are available in the monthly *Federal Reserve Bulletins* since failures are only published annually and after it is definitely known whether the closed banks will finally be classed as failures or voluntary liquidations. It should be clear, therefore, that the best one can do in an effort to construct a fairly continuous table is to use failures prior to the current year, then resort to suspensions; or use failures to 1921 and suspensions for the years and months thereafter. Suspension figures, however, cannot be broken down into the different classes of banks as can those of failures, with the result that any analysis based upon suspensions has decided limitations statistically. In the present study, which is based primarily upon tables constructed for the years 1914 to date, both failures and suspensions have been placed side by side for whatever information could be derived from them for the respective periods covered. While the most casual inspection of such a table will reveal that much of it is composed of non-comparable data, an attempt to derive anything like accurate statistical results from it will reveal that it is impossible to do more than arrive at the most general and approximate statistical conclusions. There are many gaps in the various columns, subtotals cannot be made to add up to the proper totals as published, classifications of banks overlap and mean one thing at one period and something else at another, and so on. Nevertheless, such a table probably provides us with the best information at our disposal and all we can do is attempt to derive those inferences which seem permissible and trust that the errors are of a compensating nature. In this study tables constitute an appendix for the benefit of those who wish to explore the available data further. Without attempting to present a great number of figures, we shall pass directly to the conclusions that may be derived from a table which, after all, is little more than a statistical monstrosity.¹

Average percentages of bank failures and suspensions, 1914-30. Considering the period covered by the years 1914-30—the data for 1931 are too fragmentary to be included in our present calculations, although they are included in the appendix—and thinking in terms of average yearly

¹ Other valuable sources of information relative to bank failures are the *Hearings on Branch, Chain, and Group Banking*, Committee on Banking and Currency, House of Representatives, Seventy-First Congress, Second Session, under H.Res. 141 (Feb.-June, 1930), Vol. I, Pts. 1-8, Vol. II, Pts. 9-15 and the hearings, *Operation of the National and Federal Reserve Banking Systems*, Subcommittee of the Committee on Banking and Currency, United States Senate, Seventy-First Congress, Third Session, pursuant to S.Res. 71. (Jan.-March, 1931), Pts. 1-4.

percentages, we find that the different classes of banks may be ranked as follows on the three bases of failures, suspensions, and the liabilities involved:

TABLE I
AVERAGE YEARLY PERCENTAGES OF BANK FAILURES AND SUSPENSIONS
(1914-30)

| Class of banks | Average yearly percentages of failures | Average yearly percentages suspended ^a | Average yearly percentages of liabilities of failed banks to total liabilities |
|--------------------------------|--|---|--|
| State private commercial banks | 2.88 | | 3.01 |
| State commercial banks..... | .91 | 3.60 | .46 |
| Loan and trust companies... | .67 | | .15 |
| National banks..... | .63 | 1.15 | .13 |
| Savings banks..... | .52 | | .05 |
| Aver. for all state banks..... | 1.49 | 2.99 | .30 |
| Aver. for all banks..... | 1.24 | 2.43 | .23 |

^a For years 1921-31 only.

It will be noticed that in number of suspensions as reported by the Federal Reserve Board for the years 1921-30, the average yearly percentage for state commercial banks is more than three times that for national banks. Whether we look at suspensions as reported by the Federal Reserve Board or at failures as reported by the office of the comptroller of the currency, state banks hold first place as against the national in the average yearly percentage of failures and of liabilities involved.

Percentages of bank failures for the decade, 1921-30. Stated in a different manner, we find that of the total number of banks in operation at the end of June, 1920, the number and deposits of all banks in the United States suspended for the decade January 1, 1921, to December 31, 1930, are as indicated in Table II.

Taking the total number of banks in existence on June 30, 1920, as a basis, we find the most extreme variations in the percentages of failures shown by the different states and the District of Columbia as revealed in data given by the comptroller of the currency for the years 1921-29. The ratios of the number of failures for the years 1921-29 to the number of banks in existence on June 30, 1920, ranged from zero in Vermont and the District of Columbia to 71.7 per cent in Florida. Other striking percentages were South Dakota with 56.8, New Mexico with 50, South Carolina with 49.2, North Dakota with 47.8, and Georgia with 43.2.²

The relation of amount of bank capitalization to number of suspensions. Relying upon the Federal Reserve Board's reports of suspensions for the decade, 1921-30, we find that for all banks combined there

² *Hearings on Branch, Chain, and Group Banking*, Vol. I, Pt. I, pp. 84-85.

TABLE II
NUMBER AND DEPOSITS OF ALL BANKS IN THE UNITED STATES* AT THE END OF JUNE, 1920,
AND NUMBER AND DEPOSITS OF BANKS THAT SUSPENDED FROM JANUARY 1,
1921, TO DECEMBER 31, 1930

| | Total of all banks | Member banks | | Nonmember Banks |
|---|-----------------------|--------------|-------------|--------------------|
| | | National | State | |
| <i>Number of banks</i> | | | | |
| Total number of banks in operation at the end of June, 1920..... | 30,079 | 8,025 | 1,374 | 20,680 |
| Number of banks that suspended from January 1, 1921, to Decem- ber 31, 1930..... | 6,987 | 924 | 257 | 5,806 |
| Ratio of banks that suspended during 1921-1930 to total banks in opera- tion in June, 1920 (per cent)..... | 23.2 | 11.5 | 18.6 | 28.1 |
| <i>Deposits</i> | | | | |
| Total deposits of all banks in opera- tion at the end of June, 1920 ^b | \$41,445,376 | \$17,148,231 | \$8,224,105 | \$16,073,040 |
| Deposits of banks that suspended from Jan. 1, 1921, to Dec., 31, 1930 ^b | 2,586,388 | 529,070 | 345,600 | 1,711,000 |
| Ratio of deposits of banks that sus- pended during 1921-1930 to de- posits of all banks in operation in June, 1920 (per cent)..... | 6.2 | 3.1 | 4.2 | 10.6 |

* Exclusive of Alaska and island possessions (60 banks). Cf. *Hearings on Branch, Chain, and Group Banking*, Vol. I, Pt. I, p. 80.

^b 000 omitted.

is a fairly steady increase in the percentage of suspensions as we go from the high to the low classes of capitalization. Indeed, 61 per cent of the total suspensions fall among banks of \$25,000 or less of capitalization, and 88 per cent among those of capitalization under \$100,000. The following table presents the essential facts in the situation:

TABLE III
BANK SUSPENSIONS CLASSIFIED ACCORDING TO CAPITAL STOCK (1921-1930)*

| Banks having capital stock of | National | | State member | | Nonmember | | All Banks | |
|----------------------------------|-------------|-----------------|--------------|-----------------|-------------|-----------------|-------------|-----------------|
| | Num- ber | Per- centage | Num- ber | Per- centage | Num- ber | Per- centage | Num- ber | Per- centage |
| Less than \$25,000 | | | 3 | 1 | 2,667 | 46 | 2,670 | 38 |
| 25,000 | 326 | 35 | 70 | 27 | 1,210 | 21 | 1,606 | 23 |
| 25,100 to 49,000 | 81 | 9 | 32 | 13 | 512 | 9 | 625 | 10 |
| 50,000 to 99,000 | 315 | 34 | 72 | 29 | 819 | 14 | 1,206 | 17 |
| 100,000 to 199,000 | 136 | 15 | 56 | 22 | 343 | 6 | 535 | 8 |
| 200,000 to 999,000 | 63 | 7 | 18 | 6 | 124 | 2 | 205 | 2 |
| 1,000,000 and over | 3 | .3 | 6 | 2 | 11 | .2 | 20 | .3 |
| Not available | | | | | 120 | 2 | 120 | 2 |
| | 924 | 100 | 257 | 100 | 5,806 | 100 | 6,987 | 100 |

* *Seventeenth Annual Report of the Federal Reserve Board* (1930), p. 133.

The relation of number of suspensions to size of towns. Relying again upon the Board's reports of suspensions for the decade 1921-30, we find that 40 per cent were in villages of less than 500 inhabitants, 60 per cent

in villages under 1,000 population, and 92 per cent in towns and villages with a population of 10,000 or less. The following table will present a more complete picture of the distribution:

TABLE IV
BANK SUSPENSIONS CLASSIFIED ACCORDING TO SIZE OF TOWNS (1921-1930)*

| Places with population of | Total | Percentage |
|---------------------------|-------|------------|
| Less than 500 | 2,720 | 40 |
| 500 to 1,000 | 1,411 | 20 |
| 1,000 to 1,500 | 605 | 10 |
| 1,500 to 2,500 | 674 | 10 |
| 2,500 to 5,000 | 532 | 8 |
| 5,000 to 10,000 | 299 | 4 |
| 10,000 to 25,000 | 237 | 3 |
| 25,000 and over | 419 | 5 |
| Total | 6,987 | 100 |

* *Seventeenth Annual Report of the Federal Reserve Board* (1930), p. 133.

Relative number of suspensions among member and non-member banks of the Federal Reserve System. Of the total suspensions during the years 1921-30, 83 per cent were nonmember banks, 13 per cent national banks, and 4 per cent state member banks as the following table reveals:

TABLE V
MEMBER AND NONMEMBER BANK SUSPENSIONS (1921-1930)*

| Class of bank | Number | Percentage |
|-------------------|--------|------------|
| National..... | 924 | 13 |
| State member..... | 257 | 4 |
| Nonmember..... | 5,806 | 83 |

* Compiled from *Seventeenth Annual Report of the Federal Reserve Board* (1930), p. 133.

Relation of bank failures and suspensions to business failures. A study of Table H in the Appendix shows that there is an extremely close relationship between the number of commercial and bank failures during the years 1892-1930, and that the average percentage of bank failures

TABLE VI

| Years | Average annual percentages of failures of | |
|-----------|---|------------------|
| | Commercial enterprises | Commercial banks |
| 1892-1913 | 1.00 | .59 |
| 1892-1920 | .94 | .64 |
| 1914-1920 | .81 | .23 |
| 1914-1930 | .90 | 1.24 |
| 1921-1930 | 1.06 | 1.97 |
| 1892-1930 | .97 | 1.01 |

for the period exceeds that of commercial failures. The breaking up of these data into significant periods, however, reveals some striking facts.

It will be observed that the average annual percentages of commercial and bank failures prior to 1921 were less than those since that year; that the average annual percentage of bank failures prior to 1921 also was less than that of commercial failures but that it has been far in excess of that of commercial failures since 1921; and that the period 1914-30 shows the average annual percentage of bank failures exceeding that of commercial failures for the same period and for that of the preceding twenty-two years. While a casual comparison of the average percentage of bank failures for the years 1914-30 with that of the preceding period may appear to offer a picture quite damaging to the prestige of the Federal Reserve system, it is clear that the really significant period is that from 1921 to 1930, since the average annual percentages of commercial and bank failures for the years 1914-20 are the lowest for the thirty-nine year period being considered.

Nevertheless, it has been quite the common thing, at least until recently, to point out the accomplishments of the Federal Reserve system with respect to combatting business recessions and the lessening of the disasters and hardships which flow from them as compared with the conditions which obtained prior to 1914. If we take as an example the crisis of 1907-08 it is worth while to show just how erroneous these ideas are:

TABLE VII

| Years | Average percentage of | | Liabilities of failed (in millions) | | Number of commercial banks failing |
|-------|------------------------|------------------|--|---------------------|---|
| | Commercial failures | Bank failures | Commercial enterprises | Commercial banks | |
| 1908 | 1.08 | .72 | 222 | 232 | 156 |
| 1921 | 1.02 | 1.15 | 627 | 113 | 358 |
| 1922 | 1.19/1.10 | 1.29 | 623 | 116 | 397 |
| 1930 | 1.21 | 2.59 | 668 | 308 | 640 |

A comparison of the commercial and bank failures since 1920 with those of 1893 also will show the same general situation.

A lesson that stands out clearly with respect to the period covered by the Federal Reserve system, particularly that period since 1920, is that it is marked by two of the most serious crises that we have experienced in forty years, if not altogether, and that this period has been characterized by an unprecedented number of commercial and bank failures.

Returning to the question of the relationship existing between commercial and bank failures, a study of Table H in Appendix will show just how closely commercial bank failures accompany failures of commercial enterprises. In the thirty-nine years covered by this table, the

aggregate liabilities involved in commercial and bank failures fluctuated together twenty-five times and in opposite directions thirteen times. The peaks in both series were reached simultaneously in all but two cases—1896 and 1903—as the following table will show.

TABLE VIII
PEAK YEARS FOR FAILURES AS REVEALED IN COMMERCIAL AND
BANK LIABILITIES FOR YEARS 1892-1930

| Commercial | Bank |
|------------|------|
| 1893 | 1893 |
| 1896 | 1897 |
| 1903 | 1904 |
| 1908 | 1908 |
| 1914 | 1914 |
| 1915 | 1915 |
| 1921 | 1921 |
| 1922 | 1922 |
| 1924 | 1924 |
| 1927 | 1927 |
| 1930 | 1930 |

From the evidence available it is clear that the relationship existing between commercial and bank failures is unquestionably close and since there is not much more of a lag than lead in the bank failures in the years in which they do not move together, it appears quite probable that conditions in the commercial world are responsible to a large degree for bank failures, just as bank failures have an important effect upon commercial failures. Aside from other causes which may be responsible for bank failures, it was estimated by the comptroller of the currency in 1930 that 50 per cent of the responsibility for bank failures in that year could be charged to "local financial depression in agriculture and industry." This, combined with "incompetent management" which he estimates is responsible for 38 per cent of the bank failures in that year, and which, certainly, must be very closely connected with local agricultural and industrial disasters, undoubtedly provides one of the important causes of bank failures.

However, another lesson that may be learned after a study of the data on bank failures is that we have not only a heavy percentage of bank failures during times of business recession, but also a heavy and steady series of such failures in fairly normal times and even in periods of prosperity. One cannot insist, therefore, that business recessions constitute the fundamental cause of our failures. It is true that the number of failures increases as commercial failures increase but this fact is evidence that the banks not only are not able to meet business fluctuations in the proper manner but really contribute to the severity of these fluctuations. It is instructive as well as interesting to note that in Canada, by way of contrast, bank failures appear to have very little relation to commercial failures. The remarkably few failures which have taken place

in that country indicate that the branch banking system there is much better qualified to resist the strain of business fluctuations than our system of unit banking is able to withstand the effects of business fluctuations in this country. Her business fluctuations are not as severe as ours and one contributing factor must be found in the fact that her banks are able to stand by and assist business in times of need. It may be noted, also, that bank failures are almost unknown in England, although, she has her business fluctuations. It would appear, therefore, that a fundamental explanation of the causes of bank failures in this country is to be found, partly at least, in the nature of our banking structure.

Conclusions derived from the statistics of bank failures. Before proceeding to a further analysis of the causes, problems, and possible correctives of bank failures, it may be helpful to summarize the essential conclusions at which we have arrived after an analysis of our statistical data:

(1) The heaviest failures, absolutely and relatively, are among the state banks; (2) the failures are greatest among banks with small capitalization; (3) they are heaviest in small towns and villages; (4) they are heaviest among banks outside the Federal Reserve system; (5) they have been uniformly heavier than failures of commercial enterprises since 1920 but not during the period 1892-1920; (6) they accompany very closely the rise and fall in commercial failures usually reaching the peak at the same time; (7) they are not only caused by business recessions but contribute to unsound business conditions; and (8) they are more pronounced than in any other country in the world even in fairly normal and prosperous times, which would seem to indicate that there are some fundamental and organic defects in our banking structure that require correction.

An analysis of the causes of bank failures. If the preceding conclusions are correctly deduced from the available statistical evidence, it would seem that logic compels us to attack the problem of increasing bank failures by examining what appear to be the most outstanding and fundamental defects of our banking structure which have contributed to the present unhappy situation, as well as those factors that lie outside the field of banking.

We shall consider the problems and possible correctives under the following main heads:

1. The defects inherent in the organic structure of our commercial banks and banking system.

2. Those due to the inadequate control of our credit structure by the Federal Reserve system which, in turn, result from two limitations, (a) those inherent in the structure of the Federal Reserve system, and (b) the inability or reluctance of the Reserve authorities to devise and apply adequate principles of credit control.

3. Those causes lying outside the banking field.

1. *Defects inherent in the organic structure of our commercial banks and banking system.* (a) We have an unnecessary and an unwise division of our commercial banks into national and state banks with forty-nine legislative bodies regulating and granting special privileges to their respective banks. For a long time state banks received privileges not accorded national banks; then the national banking law was liberalized to place national banks on an equality with state banks, with the result that this competitive liberalization of bank laws has led us to permit the creation of unsound banks and the indulgence of unsound banking practices. Such a system, with its forty-nine different jurisdictional authorities and forty-nine sets of laws, by its very nature, involves lack of uniformity in legislation, in standards of banking, in rates of progress, and in supervision. These conditions have been permitted to prevail for no better reason than as a concession to historical precedent and the doctrine of states' rights. Commercial banking is, and cannot be anything else than, interstate in nature and, as a result, there is no logical basis on which to defend the present classification of our banks into both national and state with the prevailing lack of uniformity in banks and banking practices.

(b) We have too many banks—especially too many small banks. The statistics of the failures place this contention beyond dispute. Competitive liberalization of our various state and national laws has been primarily responsible for this situation. The lenience on the part of our law-makers doubtless has been due to the prevalence of the doctrine of *laissez faire* in matters relating to business enterprise. As a part of this same doctrine, each community has desired its bank and, preferably, more than one bank in order to secure the full fruits of the competitive system. The securing of one or more local banks was facilitated by the low capital requirements and the ease with which the laws permitted the chartering of banks. Nearly half of the banking resources of the country are in the hands of 1 per cent of our banks (250 in our metropolitan centers), the other half being spread thinly among the other 99 per cent. Twenty-four banks, national and state, in New York City alone have a capitalization almost equal to that of 20,008 country banks situated in towns of 10,000 population or less.^a

(c) Too many banks are outside the Federal Reserve system with the result that the Reserve authorities are not in a position to regulate or aid them. The unfortunate aspects resulting from this situation reveal themselves in a striking manner during crises like those of 1920 and 1929. Of the 6987 national and state banks which failed during the decade, 83 per cent were nonmember and 17 per cent member banks. The lesson to be drawn from this evidence should be obvious.

(d) Small unit banks often do not or cannot secure the proper diversi-

^a *Hearings on Branch, Chain, and Group Banking*, Vol. I, Pt. I, pp. 22-23.

fication of their portfolios due to the fact, perhaps, that they are in communities in which a few crops or industrial activities predominate and provide them with an undue proportion of paper of a certain type, with the result that the welfare of the bank depends almost entirely upon the prosperity of the local community. Furthermore, with the increased use of the automobile and other means of communication, much of the important business of local communities has gone to the larger centers with the result that small town banks tend to hold only the unimportant local business.

(e) It appears that the proportion of paper eligible for rediscount with the Federal Reserve banks is too small for the safety of the commercial banks in times of stress. For example, the *Reports of the Comptroller of the Currency* for 1929 (p. 85) and for 1930 (p. 47) reveal that only about one-fifth of the paper, representing loans and discounts, held in the portfolios of the member banks during those years was eligible for rediscount. This means, of course, that the ability of these banks to secure help from the Reserve banks in times of need is limited to the amount of eligible paper held and to their ability to secure advances on their own promissory notes secured by United States government securities.

(f) Closely related to this situation is the fact that during recent years commercial banks have been steadily increasing the proportion of their resources given over to investments as compared with the proportion going into loans and discounts. Computing the percentages based on the averages for the years 1919 to 1925 from data given in the *Annual Reports of the Comptroller of the Currency*, we find that 22 per cent of the member banks' earning assets were investments, and 78 per cent were loans and discounts. On June 30, 1930, 29 per cent were investments and 71 per cent were loans and discounts. In a similar manner, the ratio of loans made on securities to total loans and investments has been increasing at approximately the same rate, although it is generally known that a fair proportion of the proceeds of these loans—perhaps 20 per cent—are used in commercial transactions. These figures show that commercial banks are shifting more and more from the financing of commercial transactions and are devoting an increasing proportion of their resources to the financing of fixed capital. These changing proportions contributed to the lack of liquidity in the resources of commercial banks and probably reveal a contributing factor to the increased number of bank failures. This changing proportion has an even greater significance when considered in connection with the small unit banks which invest such a large proportion of their resources in local mortgages. Table IX will show something of the trend.

(g) Directly associated with the question of the increased proportion of investments and loans on investment paper and mortgages by commercial banks are those questions relating to the increased number of invest-

TABLE IX
(In millions of dollars)

| | Total loans and investments including loans to banks and open market purchases | Investments on securities | Loans on securities | All other loans | Ratio of investments to total loans and investments (in per cent) | Ratio of loans on securities to total L. and S. (in per cent) | Ratio of investments plus loans on securities to total loans and investments (in per cent) |
|--|--|---------------------------|---------------------|-----------------|---|---|--|
| All member banks (June 30, 1930) ^a | 35,656 | 10,442 | 10,656 | 14,558 | 29 | 30 | 59 |
| All member banks (June 29, 1929) ^b | 35,711 | 10,052 | 10,094 | 15,565 | 28 | 28 | 56 |
| 719 reporting member banks in 101 centers (June 24, 1925) ^c | 18,710 | 5,505 | 5,206 | 7,999 | 29 | 28 | 57 |
| 719 reporting member banks in 101 centers (yearly average for 1921) ^d | 15,346 | 3,366 | 3,697 | 7,063 | 22 | 24 | 46 |

^a *Seventeenth Annual Report of the Federal Reserve Board* (1930), p. 93.

^b *Ibid.*

^c *Twelfth Annual Report of the Federal Reserve Board* (1925), p. 145.

^d *Ibid.*, p. 144.

ment and other non-commercial banking affiliates which have been attached to commercial banks, particularly in metropolitan centers, in recent years. It seems beyond question that these have been dangerous factors in commercial banking, due to the fact that they have involved the commercial banks in many non-commercial banking activities which, in the opinion of many people, belong entirely outside the legitimate range of commercial banking. These devices for disguising the non-commercial activities of commercial banks have been all the more dangerous because of the fact that they disguise the true situation. In general, no provision is made either in national or state banking laws for the examination of these affiliates by commercial banking authorities. Only a few have been examined and this has been made possible through the courtesy extended to the bank examiners by the bank concerned. That these affiliates have been contributing factors to the number of bank failures seems beyond question. It was reported that when the Bank of the United States, in New York City, failed, it had about fifty affiliates with relationships so involved that it is doubtful if they could be disentangled.

(h) Another factor which has contributed to the weakening of our commercial banking structure has been the steady increase in the proportion of time as against demand deposits. On the basis of the average percentages for the years 1919-25, we find that demand deposits

amounted to 50 per cent, and time deposits to 32.5 per cent, of the earning assets of the member banks of this country, while, on June 30, 1930, demand deposits amounted to 52 per cent and time deposits to 38 per cent of the earning assets. Against these time deposits, which have increased absolutely and relatively during recent years, a reserve of only 3 per cent is held despite the fact that the cash derived from these time deposits is treated like the cash received from demand deposits against which a much higher reserve must be kept. This situation has presented an inviting, although a dangerous, opportunity to commercial banks. It has been inviting to commercial banks because it has been more profitable for them to expand their loans and investments and reap greater profits. It has been a dangerous factor for the banks since they have been led into making loans and investments of a type not appropriate for banks engaged in a savings banking business, and also in the fact that their reserve ratio against genuine demand liabilities has tended to fall below that required against such liabilities. From the point of view of the savings depositor, the situation has been fundamentally bad, although he has received some conveniences not afforded by the genuine savings banks. In most instances he has been able to withdraw his time deposits without prior notice, and quite often, if not usually, his commercial bank has been more conveniently located than the nearest savings bank. Against these services, however, is the fact that his deposits have not been and are not properly secured by reserves and investments as well as the fact that in the event of a run on a bank the time depositor can be made to wait at least thirty days to present his claims while his funds are being paid over the counter to meet the claims of the demand depositors. If the interests of depositors are to be considered seriously in connection with bank failures, and if the small saver is to be given the proper protection due him, then here is another problem which needs study and correction.

(i) The unit costs in our great multitude of small banks are relatively high and the net returns are very low. The prevalence of ostentatious buildings and equipment is no small factor in this situation. An analysis by the comptroller of the currency of bank earnings showed that a large proportion of the banks outside of metropolitan centers were not earning enough to justify their existence. This was true even in such relatively prosperous years as 1925, 1926, and 1927. In 1927 nearly 966 national banks were operating at a loss, and an additional 2000 were earning less than 5 per cent. This constituted about 38 per cent of all national banks in the United States.⁴ The situation among the state banks was even worse.

(j) Another defect of our unit banking system, especially of our small banks, is found in the poor management which generally character-

⁴ *Hearings on Branch, Chain, and Group Banking*, Vol. I, Pt. I, p. 5.

izes them. In general, the officers are of an inferior sort. Perhaps the cashier, and a few others in the bank, has had some formal training in banking procedure and principles, but the training of the president and others responsible for running the bank has probably been along different lines. The leading citizen in most communities usually hopes to complete and polish off his business career, whether he be the successful grocer or butcher, by becoming the president of the local bank. This phenomenon is a traditional and a peculiar characteristic of American life. Such men ordinarily are individualists and resist co-operation. They are typical small-town men, often called hard-headed business men and the backbone of our nation. In the proper sense of the term, however, they usually are not bankers. They may know something of the technique of banking but little of its fundamental and far-reaching principles. They are not well acquainted with the literature on banking, with the tendencies, current problems, and possible solutions which should be of interest to them. They resist the collecting and filing of data on local and more general business conditions which affect their bank; they resist modernizing methods; they often permit sentiment to play too large a part in the making of local loans; the directorates usually are filled with local business men who know little about banking and often are indifferent regarding the bank's affairs. Everyone, of course, recognizes that there are many fine exceptions to these generalizations; nevertheless sober reflection must impress one with the general accuracy of the picture and with the fact that the type of management characterizing a large part of our unit banking system is an important factor in bank failures. For example, the comptroller of the currency, in analyzing the causes of the failures of the national banks in charge of receivers on October 31, 1930, listed them as follows:⁵

| | <i>Per Cent</i> |
|--|-----------------|
| A. Incompetent management | 38 |
| B. Dishonesty | 9 |
| C. Local financial depression from agricultural or industrial disaster | 50 |
| D. Receiver appointed to levy and collect stock assessment covering deficiency in value of assets sold | 3 |
| E. Temporary suspension | 1 |

A study of these classifications and percentages will reveal that it probably is not possible to separate the 38 per cent of failures due to incompetent management from those due to local business depressions since it is the purpose and test of good bank management to avoid the effects of local financial depressions. Traditional practices of these small unit banks combined with the circumstances in which they find themselves bind them closely to the activities of the local community.

⁵ *Annual Report of the Comptroller of the Currency* (December 1, 1930), pp. 307-321.

(k) Finally, we may mention the fact that the problem of inadequate bank supervision is still with us. Due frequently to the youth and relative inexperience of many of our bank examiners, it becomes a fairly simple matter for sharp bank officers to outwit them. Usually the staffs of examiners and of examination departments are inadequate and poorly paid. The great number of failures is evidence of the fact that they are unable to cope with the situation. In addition, we have the problems arising from the conflict of authority, if not a total lack of authority, with respect to the examination of chain and group banks and the non-banking holding companies that are sometimes a part of these systems. We also still find difficulties in the way of quick and effective action on the part of the comptroller of the currency in correcting unsound banking practices due to bad management on the part of officers and directors of banks.

2. Inadequate control of credit by our Federal Reserve authorities. Another fundamental explanation of our phenomenal number of bank failures is to be found in the inadequate control of credit, with particular reference to the business cycle, which characterizes our Federal Reserve system. This is due to the limitations placed upon the possibilities of credit control because of the structural characteristics of the Reserve system and to the inability or lack of ability of those in charge to devise the principles and mechanism that are effective within the limits which the structure of the system permits. Regarding the first set of limitations, it may be pointed out that fundamental restrictions upon the possibilities of controlling credit in the interests of price level stability exist due to the necessity of maintaining legal reserve requirements, the fact that there is a tremendous amount of credit in use which is beyond the scope of authority of the Reserve system, and the fact that our Reserve system is not linked properly with an international clearing mechanism like that provided by the Bank for International Settlements. With these organic defects in our Federal Reserve system, it is impossible for the Reserve authorities to use their mechanism of credit control in the interests of price level stability, assuming that they desire to exercise such control, with the expectation that they can secure the desired results more than very approximately. Indeed, some of these limitations, such as the necessity of maintaining the reserve structure, become of such paramount importance at times that there is not the remotest possibility of maintaining a stable price level.

The amount of credit in use which is beyond the control of the Federal Reserve authorities, and yet affects business conditions and the price level, is sufficient to upset their best laid plans. We only need mention the tremendous amount of credit used in the stock market, the capacity of the Federal Farm Loan system to extend too much credit to farmers, and the various other non-commercial banking systems and enter-

prises lying outside the Reserve system to appreciate the significance of this problem in the question of credit control.

Space will not permit a consideration of the handicaps experienced by a country like this which might attempt to control credit in the interests of business stability while not co-operating with or participating in an international clearing bank further than to say that the present gold problem of this and other countries would doubtless be minimized if such an international clearing device existed and we participated in it.

Recognizing, however, these organic limitations inherent in the nature of the Reserve system, it is believed that much more could be done than has been done to control credit in the interest of price level stability. We have had several years of experience with surplus reserves during which it seemed clear that our principles, policies, and mechanism of credit control had not been developed to the best possible limits. It is generally understood that there has been lack of agreement among Reserve authorities as to the proper criteria to be used in the attempts to control credit; lack of agreement as to the principles according to which the mechanism of credit control should be used in the event there is agreement as to the ends to be attained; and lack of agreement as to the proper instruments to be employed in an effort to apply suitable principles.

The questions of the inherent limitations of the Federal Reserve system combined with the lack of agreement regarding theories of credit control present some of the most formidable problems with which a people, desirous of correcting the defects of its money and banking structure, can be faced. Regardless of the present state of individual opinion on these points, the fact must be apparent to all that since the inauguration of the Federal Reserve system we have witnessed the greatest fluctuations in the price level and the greatest number of bank failures for the years involved that this country has ever seen. From these facts the lesson must be clear that the system is not meeting present-day demands properly and that some well-considered corrections should be made.

3. Causes lying largely outside the banking field. Finally, we may mention those causes which lie largely outside the field of banking in the sense that they exist regardless of the structure and policies of any banking system and in the sense that it is extremely difficult if not impossible for a banking system to adapt itself to them in any very successful manner. There are those instances of abnormal production in certain very important basic industries, as in the case of wheat, for example, induced by the demands during the World War, in which the attempted readjustments have brought widespread suffering; there are those cases of distorted production and consequent unpleasant readjustments which have been the result of various unsound price-fixing schemes; there has been a distortion of foreign trade and of the distribution of the world's gold supply as a result of debt and reparation payments and the erection of

tariff barriers; there has been an unusual fostering of production as a result of the abnormal development of installment purchasing which was prevalent during the few years prior to the present recession; there are those factors, other than money and credit, which contribute to business cycles; and, finally, we may mention again the shifting of business from small to larger business centers as a result of the improvement of roads, the increased use of the automobile, the development of larger business units, chain stores, and so on.

Possible correctives. If the preceding analysis of the causes of bank failures is sound, then it would seem that we have been provided with definite clues as to the changes that should be considered carefully and probably made in our banking structure and practices after weighing the evidence regarding each revealed weakness and possible corrective.

If we are to attempt to correct the structural defects of our commercial banking system, the evidence would seem to indicate that all commercial banks should be brought within the Federal Reserve system if it is to exercise genuine control over commercial credit, perform its other functions properly, and provide the proper aid and protection to commercial banks. Furthermore, since commercial banking is interstate in nature, it appears preferable to convert all commercial banks into national banks, leaving for the state banks the savings bank and trust company business in so far as possible, although it would not seem advisable to deny these functions to national commercial banks also, since there would be a great number of places in which there would be no savings banks and trust companies to provide the necessary services to the people. The questions of states' rights and constitutional limitations do not present insurmountable difficulties. When a business becomes interstate in nature or becomes an instrumentality vital to the free movement of interstate commerce, the business is national in character and should be brought under national jurisdiction. In such cases the states have no rights that demand protection since the public well-being is at stake.

As to the constitutional aspect of the question, it is quite doubtful whether there are any constitutional difficulties involved. Considering the various court decisions, including the famous cases of *McCulloch v. Maryland*, and *Osborn v. Bank of the United States*, as well as some similar ones since, it appears that the currency and fiscal clauses of the Constitution, as interpreted by the United States Supreme Court, provide ample authority for such a change. All that is necessary, apparently, is for Congress to decide that an exclusively national commercial banking system is a necessary instrumentality in the development and enforcement of national currency and fiscal policies since it appears clear that the principles of constitutional law set forth in the case of *McCulloch v. Maryland* are applicable to the present situation. If this is not true, then it naturally follows that a national commercial banking policy can be

defeated by the state commercial banks, a situation that is both irrational and intolerable in this country. Furthermore, while some writers have held that banking, like insurance, is not interstate commerce, it seems quite doubtful whether there is any basis for such a contention. Frederick N. Judson in his *Interstate Commerce*⁶ has said that "the business of private banking is not commerce, although it may include the receipt of bailments from other states," and cites the case of *Engel v. O'Malley*⁷ in support of his contention. Various writers since have rested their arguments on both Judson and the case of *Engel v. O'Malley* without learning, apparently, that the case cited does not hold that banking is not interstate commerce. A search through legal records has not revealed any case in which the United States Supreme Court has held that commercial banking is not interstate commerce. It would seem, therefore, that if such a question could come before the United States Supreme Court, straight reasoning would compel the court to rule that commercial banking is interstate commerce. In any event, it appears highly probable that the court could rule quite reasonably that commercial banking is a necessary instrumentality of interstate commerce and, therefore, comes within the jurisdiction of the federal government whenever it chooses to exercise its authority. Regardless of the merits of the question of constitutionality, the way of progress does not lie in abstaining from undertaking what appears necessary and proper because of some supposed constitutional obstacle. Let the changes be made and the issue be tested in the courts. If the Constitution is violated, amend the Constitution. A sound banking structure is of far greater importance to a people than the adherence to a constitutional provision that prevents the making of changes necessary to meet present-day problems.

A further argument in favor of nationalizing all commercial banks rests upon the fact that it is hardly rational to expect much progress, and certainly not uniform progress, by waiting for forty-nine different legislative bodies to agree upon and pass sound and progressive legislation. A fundamental purpose of the Federal Reserve system was to provide us with a national policy and system but it cannot be made effective with the present organization of our commercial banking structure. We can accomplish these things only through a national law. Business cycles are national in scope as are the problems of credit control; commerce is interstate and international in nature; the problems of a proper reserve structure are national and even international in their ramifications, and such questions can be dealt with adequately only by a governmental body with the proper jurisdictional authority. It is an interesting fact that while careful reflection should have convinced us long ago that a nation must have a national commercial banking system and policy, since this is es-

⁶ T. H. Flood and Co., Chicago, 1916, 3d ed., Sec. 18, p. 18.

⁷ 219 U.S. 128, 138, 139; 182 Fed. 865 (1910).

essential to national well-being, we have continued to permit a scattered type of banking with the accompanying diffusion of authority that has made an effective national policy impossible. Too much democracy in banking has been a devastating factor in our economic life.

It appears also that branch banking should be provided for in order to enable banks to secure the proper diversity in their portfolios; to eliminate the problems now associated with small unit banking; to provide adequate capitalization so that the banks can engage, not only in local financing, which today is often beyond the capacity of the local bank, but in a wider type of commercial financing; to insure a better grade of management; and to eliminate some of the dangers now associated with chain and group banking. It seems logical, also, for such branch banking to be as wide as the Federal Reserve districts, if not nationwide, in order to secure proper diversification, and the other virtues that appear to accompany well-organized branch banking. Under such a system, branch offices could and should be opened where a unit bank could not exist profitably and without danger to the community. It is interesting to consider the fact that while we are willing to permit our large banks to establish branches in the far corners of the world, we have been unwilling to permit them to establish branches within the country despite the fact that about 90 per cent of our trade is national rather than international and despite the fact that we could regulate domestic branches more effectively than the foreign.

In so far as unit banking continues, the minimum capitalization limits should be raised.

Study should be given to the question of the proportion of rediscountable paper which member banks should hold as well as to the proportions of other types of paper, especially investment and mortgage paper, which might be included with safety in their portfolios. In a similar manner, study might be given profitably to the possibility of devising a scheme for increasing the margin of collateral required as security for loans when the price level is rising.

There also appears to be considerable merit in the proposals made to aid, through the creation of central mortgage rediscount banks, the various institutions which hold real estate mortgage paper.

Since good central banking appears to depend upon the maintenance of liquidity, extreme care should be taken in admitting any new type of paper to the portfolios of the Reserve banks which might impair this liquidity. The attempt to give a central banking system wide powers of credit control seems to conflict at certain points with the attempt to maintain its liquidity.

Non-commercial banking affiliates doubtless should be brought under strict control of and be examined by the proper commercial banking authorities, if, indeed, they should not be severed from commercial bank-

ing institutions. Careful consideration should be given also to the possibilities of placing strict limits upon the total amount of loans which commercial banks may make to their affiliates in the event they are not severed from the commercial banks.

Time deposits, especially those of a thrift or savings nature, should be under the same restrictions as to investment as savings deposits in savings banks and the resources segregated, or the reserves against these deposits should be the same as against demand deposits. Perhaps an effective combination of both ideas could be devised.

Every reasonable step should be taken to improve the system of bank reports, examinations, and methods of dealing with recalcitrant bank directors and officers. Until a thorough overhauling of our commercial banking structure is effected, the Comptroller's Office should be given authority to examine and exact reports from every unit in the chain and group banking systems which are interstate in character or in which a national bank is one of the units.

Steps should be taken to remove all obstacles to control which are inherent in the structure of the Federal Reserve system, and which now hamper our Reserve authorities.

The plan recently proposed by the Committee on Member Bank Reserves according to which reserves would tend to increase and decrease in harmony with the expansion and contraction, respectively, of bank deposits and debits would seem to provide the Federal Reserve system with an additional instrument of credit control which is more or less automatic in nature. If credit control, looking to the stability of the price level, is to be made effective under all conditions, provision must also be made in some manner to overcome the contraction of credit that necessarily follows when the minimum legal reserve requirements are reached. One possible way out is to use the gold reserves largely for international clearing purposes, and retain only enough to maintain confidence in the domestic currency. If an international clearing fund were established, in which a portion of our reserves was held, the necessity for reserves at home would be minimized and gold shipments would be less necessary and less dangerous. Another possible way out might be found in varying the weight of the gold dollar along the lines already proposed by Professor Fisher, which, of course, means an increase in the buying price of gold at one time and a decrease in its buying price at another. Although we have provisions at present by which reserve limitations can be exceeded under penalty conditions, a change in weight probably would assure a slower exhaustion of the reserves than would be possible under present arrangements. Unless some such scheme is devised to meet the problem of overcoming minimum legal reserves, stabilization of the price level under such conditions appears to be an idle dream.

The third fundamental consideration to be dealt with if we are to con-

control credit effectively involves the development of the proper relations with an international clearing bank. Regardless of any particular device that might be created to overcome the rigidity of minimum reserve requirements, central banking systems today cannot work alone in their attempts to control credit. An international clearing mechanism is a logical and economical device which would do much to prevent and correct maldistributions of gold. It would permit sufficient economies in the use of gold to cause the problem of world scarcity of gold to recede far into the background if not disappear altogether. Without international clearing and international co-operation, credit control probably would continue to work only within rather narrow limits.

Assuming that we can provide the banking structure and the specialized instruments necessary to credit control, the next step would be to develop principles of action and to make strenuous efforts to educate the public as to the nature of these principles and the reasons for certain measures being taken by the reserve authorities under given conditions. It is reasonable to suppose that in time the public would become accustomed to such measures, would learn their significance, and would learn to respond intelligently to them.

Regarding the correction of those probable causes of bank failures lying largely outside the banking field, it may be said that some of the difficulties cannot be removed until the world can find a rational substitute for wars. In the meantime much can be accomplished by not engaging in unwise price-fixing schemes, by the adoption of more enlightened tariff measures, by doing more to educate the general public on the dangers of large installment buying as well as other dangerous practices that characterize the expansion period of the business cycle and lead us into crises. Such steps are of genuine importance since it appears clear that the instruments of credit control with respect to business cycles function best, if not almost entirely, during periods of business expansion.

That our banking system is out of joint and in need of overhauling seems clear. It is also well understood that out of every business crisis come demands for revision of our banking laws. It is a national habit despite the fact that we know we already have our bankers in legal strait-jackets when compared with the freedom given to bankers in such a country as England. Nevertheless, this seems to be the only feasible way to correct existing defects, since we cannot afford to perpetuate our system of little unit banks, with its amateur bankers, with its inability to cope with modern business problems satisfactorily, and with its tremendous number of bank failures which have caused unmeasured losses and untold misery for millions of depositors, borrowers, stockholders, officers, and directors, who have striven valiantly to accumulate a little surplus which will afford them security in the evening time of their lives. The Comptroller of the Currency, before the Currency Committee of the

House of Representatives investigating group, chain, and branch banking, painted the picture vividly when he said (in February, 1930): "There is no more distressing sight than a group of citizens, men and women, clamoring before the closed doors of a bank bewailing the loss of their savings. These losses fall upon the best and most substantial citizens in the community and many of them never recover their previous financial condition. Multiply this local event by nearly 6,000 and scatter it throughout the great agricultural states of the Union and the magnitude of its effects reaches astounding proportions.

"It is estimated that 7,264,957 depositors have contributed to the great total of more than \$1,700,000,000 of deposits in failed banks during the past nine years and that no less than 114,000 shareholders have suffered losses through these suspensions."⁸ As to similar adverse effect upon the borrowers of a bank, the Comptroller pointed out that "failed banks in the United States have caused within the last nine years the enforced liquidation of approximately two billion dollars of loans—chiefly small loans."⁹

The tragedies of depositors and others today, in a country that is supposed to know something about how to devise laws to protect the needy against unsound social institutions and devices, are a sufficient answer in themselves to those who insist that the laws do not need revision. It is certainly high time that those interested in the welfare of the depositors, the common man and woman, and the public in general—and this means the legislators, the press, the social scientists, and those outstanding bankers who see the banking business in its proper setting—should join hands and do all things possible to correct present defects so that the losses and tragedies which characterize our present banking system will speedily and definitely become events of history without probability of recurrence.

⁸ Vol. I., Pt. I, pp. 13-14.

⁹ *Ibid.*, p. 14.

APPENDIX

BANK FAILURES AND SUSPENSIONS

Compiled from *Annual Reports of the Comptroller of the Currency, Annual Reports of the Federal Reserve Board*, and *Federal Reserve Bulletin*. (In the following tables, liabilities and deposits in thousands, failures for fiscal years, and suspensions for calendar years.)

TABLE A
NATIONAL BANKS

| Year | Number in United States (June 30) ^a | Number Suspended (Dec. 31) ^b | Percentage Suspended | Number Failed ^c | Percentage Failed | Liabilities of Failed Banks (June 30) ^d | Liabilities of All Nat. Banks ^d (June 30) | Percentage of Liabilities of Failed Banks to Total |
|----------|--|---|----------------------|----------------------------|-------------------|--|--|--|
| 1914 | 7453 | | | 21 | .28 | \$ 9,774 | \$ 11,482,191 | .09 |
| 1915 | 7560 | | | 14 | .18 | 12,767 | 11,795,683 ^e | .11 |
| 1916 | 7571 | | | 13 | .17 | 3,020 | 13,926,868 | .02 |
| 1917 | 7589 | | | 7 | .09 | 5,282 | 16,151,040 ^f | .03 |
| 1918 | 7691 | | | 2 | .03 | 2,359 | 17,859,502 ^g | .01 |
| 1919 | 7702 | | | 1 | .013 | 496 | 20,799,550 | .002 |
| 1920 | 8019 | | | 5 | .06 | 1,930 | 22,196,737 | .01 |
| 1921 | 8147 | 51 | .62 | 28 | .34 | 17,301 | 19,638,446 | .09 |
| 1922 | 8246 | 45 | .54 | 33 | .40 | 20,287 | 20,706,010 ^h | .10 |
| 1923 | 8238 | 90 | 1.08 | 37 | .45 | 20,076 | 21,511,766 | .09 |
| 1924 | 8085 | 122 | 1.49 | 138 | 1.68 | 74,743 | 22,565,919 | .33 |
| 1925 | 8070 | 118 | 1.44 | 102 | 1.24 | 53,315 | 24,350,863 | .22 |
| 1926 | 7978 | 125 | 1.54 | 77 | .96 | 38,112 | 25,315,624 | .15 |
| 1927 | 7796 | 91 | 1.15 | 142 | 1.79 | 59,915 | 26,581,943 | .22 |
| 1928 | 7691 | 57 | .74 | 71 | .91 | 32,905 | 28,508,239 | .12 |
| 1929 | 7536 | 64 | .84 | 69 | .91 | 47,677 | 27,440,229 ⁱ | .17 |
| 1930 | 7252 | 161 | 2.17 | 82 | 1.12 | 55,291 | 29,116,539 | .19 |
| Totals | | 924 | | 842 | | \$455,250 | \$359,927,151 | |
| Averages | | | 1.15 | | .63 | | | .13 |

1931¹

| | |
|----------------|------------------|
| January..... | 22 |
| February..... | 15 |
| March..... | 18 |
| April..... | 17 |
| May..... | 24 |
| June..... | 27 |
| July..... | 15 |
| August..... | 26 |
| September..... | 46 |
| October..... | 99 |
| November..... | 34 |
| December..... | 343 |
| | 345 ¹ |

^a *Annual Report of the Comptroller of the Currency*, Dec. 1, 1930, p. 77. Figures given here conflict with some of those given on pp. 438-447 of the same report.

^b *Seventeenth Annual Report of the Federal Reserve Board* (1930), p. 131. Percentages are computed by adding number failed or suspended to number of banks still in existence and dividing total into number suspended or failed.

^c *Annual Report of the Comptroller of the Currency*, Dec. 1, 1930, p. 770.

^d *Ibid.*, Dec. 5, 1921, pp. 330-341, for years, 1914-21.

^e As of June 23.

^f As of June 20.

^g As of June 29.

^h *Annual Report of the Comptroller of the Currency*, Dec. 1, 1930, pp. 440-448, for years, 1922-30.

ⁱ *Federal Reserve Bulletins* (1931). Monthly figures are preliminary. Only totals are revised.

¹ Revised total for January-November.

TABLE B
STATE COMMERCIAL BANKS

| Year | Number in United States (June 30) | Number Suspended ^b (Dec. 31) | Percentage Suspended | Number Failed ^c | Percentage Failed | Liabilities of Failed Banks ^d | Liabilities of All State Commercial Banks | Percentage of Liabilities of Failed Banks to Total |
|-------------------|-----------------------------------|---|----------------------|----------------------------|-------------------|--|---|--|
| 1914 | 14512 ^a | | | 53 | .36 | \$ 11,511 | \$ 4,353,603 ^a | .26 |
| 1915 | 14598 | | | 57 | .39 | 4,880 | 4,399,602 | .11 |
| 1916 | 15450 ^d | | | 23 | .15 | 2,991 | 5,552,977 | .05 |
| 1917 | 15968 ^e | | | 15 | .09 | 3,351 | 6,799,669 ^e | .05 |
| 1918 | 16596 ^f | | | 12 | .07 | 1,094 | 7,815,739 ^f | .01 |
| 1919 | 17225 | | | 35 | .20 | 7,775 | 11,701,606 | .07 |
| 1920 | 18195 | | | 32 | .18 | 11,945 | 14,009,781 | .09 |
| 1921 | 18875 | 450 | 2.33 | 263 | 1.37 | 24,810 | 14,199,099 | .17 |
| 1922 | 18232 ^g | 309 | 1.67 | 306 | 1.65 | 79,044 | 13,064,406 ^g | .56 |
| 1923 | 18043 | 558 | 3.00 | 202 | 1.11 | 53,886 | 14,162,862 | .38 |
| 1924 | 17436 | 654 | 3.61 | 699 | 3.85 | 182,136 | 14,816,011 | 1.21 |
| 1925 | 16983 | 494 | 2.83 | | | 112,301 | 15,979,238 | .70 |
| 1926 | 16493 | 831 | 4.80 | | | 144,718 | 16,597,656 | .86 |
| 1927 | 15690 ^h | 571 | 3.51 | | | | 16,564,988 ^h | |
| 1928 | 15078 | 434 | 2.80 | | | | 16,291,003 | |
| 1929 | 14437 | 578 | 3.85 | | | | 16,824,315 | |
| 1930 ⁱ | 13582 | 1284 | 8.64 | | | | 15,269,902 | |
| Totals | | 6163 | | 1697 | | \$661,362 | \$208,402,517 | |
| Averages | | | 3.60 | | .91 | | | .46 |

^a Annual Report of the Comptroller of the Currency (Dec. 3, 1917), Vol. II, pp. 884-886, for years 1914-17.

^b Seventeenth Annual Report of the Federal Reserve Board (1930), p. 131.

^c Annual Report of the Comptroller of the Currency, Dec. 5, 1921, p. 771 and Dec. 1, 1930, p. 770.

^d Includes stock savings banks and trust companies of five states, stock savings banks in four states, and trust companies in one state. See *loc. cit.*, p. 884.

^e Annual Report of the Comptroller of the Currency, Dec. 5, 1921, p. 760, for years 1917-21. Includes stock savings banks for thirteen states and trust companies for eight states.

^f *Loc. cit.* Includes stock savings banks for twelve states and trust companies for eight states.

^g Annual Report of the Comptroller of the Currency, Dec. 10, 1926, p. 602, for years 1922-26.

^h *Ibid.*, Dec. 1, 1930, p. 752, for years 1927-30.

ⁱ It is not possible to break down data for 1931 into classes of state banks. See total in Table IV.

TABLE C
MUTUAL AND STOCK SAVINGS BANKS

| Year | Number in United States (June 30) ^a | Number Suspended | Percentage Suspended | Number Failed | Percentage Failed | Liabilities of Failed Banks | Liabilities of All Savings Banks | Percentage of Liabilities of Failed Banks to Total |
|----------|--|---------------------|-------------------------|------------------|----------------------|--------------------------------|-------------------------------------|---|
| 1914 | 1100 | | | 7 ^b | .63 | \$ 769 ^b | \$ 6,449,463 ^c | .012 |
| 1915 | 1159 | | | 5 | .43 | 4,335 | 5,558,056 | .078 |
| 1916 | 1864 | | | 3 | .16 | 11,885 | 5,581,271 | .21 |
| 1917 | 1807 | | | 1 | .06 | 100 | 5,938,932 ^d | .002 |
| 1918 | 1819 | | | 1 | .05 | 80 | 6,001,750 | .001 |
| 1919 | 1719 | | | 2 | .12 | 85 | 6,452,805 | .001 |
| 1920 | 1707 | | | | | | 7,125,430 | |
| 1921 | 1707 | | | 13 | .75 | 2,736 | 6,598,031 | .04 |
| 1922 | 1685 | | | 11 ^e | .65 | 2,248 ^e | 7,935,570 ^f | .03 |
| 1923 | 1647 | | | 17 | 1.02 | 5,607 | 8,695,508 | .06 |
| 1924 | 1603 | | | 33 | 2.02 | 11,708 | 9,288,040 | .13 |
| 1925 | 1583 | | | | | | 10,006,164 | |
| 1926 | 1524 | | | | | | 10,618,734 | |
| 1927 | 1461 | | | | | | 10,826,723 ^g | |
| 1928 | 1407 | | | | | | 11,395,356 | |
| 1929 | 1358 | | | | | | 11,596,801 | |
| 1930 | 1320 | | | | | | 11,816,417 | |
| Totals | | | | 93 | | \$39,553 | \$141,884,551 | |
| Averages | | | | | .52 | | | .05 |

^a Annual Report of the Comptroller of the Currency, Dec. 1, 1930, p. 109.

^b Ibid., Dec. 5, 1921, p. 771, for years 1914-21.

^c Computed from Annual Report of the Comptroller of the Currency (Dec. 3, 1917), Vol. II, pp. 885-886, for years 1914-16.

^d Computed from Annual Report of the Comptroller of the Currency, Dec. 5, 1921, p. 761, for years 1917-21.

^e Ibid., Dec. 10, 1926, p. 614, for years 1922-24.

^f Loc. cit., p. 603, computed for years 1922-26.

^g Annual Report of the Comptroller of the Currency, Dec. 1, 1930, pp. 753-754, computed for years 1926-30.

TABLE D
LOAN AND TRUST COMPANIES

| Year | Number in United States (June 30) ^a | Number Suspended | Percentage Suspended | Number Failed ^b | Percentage Failed | Liabilities of Failed Companies ^b | Liabilities of All Companies | Percentage of Liabilities of Failed Cos. to Total |
|----------|--|---------------------|-------------------------|-------------------------------|----------------------|--|---------------------------------|--|
| 1914 | 1564 | | | 9 | .57 | \$ 8,752 | \$ 5,489,531 ^c | .16 |
| 1915 | 1664 | | | 9 | .54 | 1,341 | 5,873,120 | .02 |
| 1916 | 1600 | | | 3 | .19 | 257 | 7,028,270 | .004 |
| 1917 | 1608 | | | 4 | .25 | 2,371 | 7,899,818 | .03 |
| 1918 | 1669 | | | 2 | .12 | 1,898 | 8,317,431 ^d | .02 |
| 1919 | 1377 | | | 4 | .29 | 1,651 | 7,959,996 | .02 |
| 1920 | 1408 | | | 3 | .21 | 3,978 | 8,320,018 | .05 |
| 1921 | 1474 | | | 26 | 1.73 | 65,535 | 8,181,092 | .79 |
| 1922 | 1550 | | | 35 | 2.21 | 17,641 | 8,533,850 ^e | .21 |
| 1923 | 1643 | | | 7 | .42 | 2,818 | 9,409,259 | .03 |
| 1924 | 1664 | | | 14 | .83 | 23,868 | 10,323,777 | .23 |
| 1925 | 1680 | | | | | | 11,565,549 | |
| 1926 | 1656 | | | | | | 12,203,196 ^f | |
| 1927 | 1647 | | | | | | 13,994,756 | |
| 1928 | 1633 | | | | | | 15,230,896 | |
| 1929 | 1608 | | | | | | 16,155,175 | |
| 1930 | 1564 | | | | | | 17,702,660 | |
| Totals | | | | 116 | | \$130,110 | \$174,280,404 | |
| Averages | | | | | .67 | | | .15 |

^a Annual Report of the Comptroller of the Currency, Dec. 1, 1930, p. 102.

^b Ibid., Dec. 10, 1926, p. 614.

^c Ibid., Dec. 3, 1917, p. 887, for years 1914-17.

^d Ibid., Dec. 5, 1921, p. 760, for years 1918-21.

^e Ibid., Dec. 10, 1926, p. 602, for years 1922-26.

^f Ibid., Dec. 1, 1930, p. 753, for years 1926-30.

TABLE E
PRIVATE BANKS

| Year | Number in United States | Number Suspended | Percentage Suspended | Number Failed ^b | Percentage Failed | Liabilities of Failed Banks ^b | Liabilities of All Private Banks | Percentage of Liabilities of Failed Banks to Total |
|----------|-------------------------|------------------|----------------------|----------------------------|-------------------|--|----------------------------------|--|
| 1914 | 1064 ^a | | | 27 | 2.47 | \$11,027 | \$ 196,540 ^a | 5.31 |
| 1915 | 1036 | | | 39 | 3.63 | 17,870 | 177,666 | 8.91 |
| 1916 | 1014 | | | 12 | 1.17 | 877 | 181,852 | .48 |
| 1917 | 936 | | | 15 | 1.58 | 5,478 | 192,937 | 2.76 |
| 1918 | 1091 ^c | | | 10 | .91 | 7,186 | 236,566 ^c | 2.95 |
| 1919 | 1017 | | | 1 | .10 | 100 | 266,122 | .04 |
| 1920 | 799 | | | 9 | 1.11 | 3,031 | 212,626 | 1.41 |
| 1921 | 708 | | | 28 | 3.80 | 3,044 | 175,806 | 1.71 |
| 1922 | 673 ^d | | | 12 | 1.75 | 3,000 | 185,531 ^d | 1.59 |
| 1923 | 604 | | | 11 | 1.79 | 2,239 | 165,516 | 1.33 |
| 1924 | 560 | | | 31 | 5.25 | 5,476 | 150,943 | 3.50 |
| 1925 | 523 | | | 19 | 3.51 | 6,427 | 155,223 | 3.98 |
| 1926 | 495 | | | 26 | 4.99 | 3,105 | 174,152 | 1.75 |
| 1927 | 467 ^e | | | 45 | 8.79 | 9,342 | 164,148 ^e | 5.38 |
| 1928 | 404 | | | 27 | 6.26 | 3,222 | 148,834 | 2.12 |
| 1929 | 391 | | | 25 | 6.01 | 2,883 | 156,490 | 1.81 |
| 1930 | 361 | | | 23 | 5.99 | 11,001 | 114,606 | 8.76 |
| Totals | | | | 360 | | \$94,803 | \$3,055,067 | |
| Averages | | | | | 2.88 | | | 3.01 |

^a *Annual Report of the Comptroller* (Dec. 3, 1917) Vol. I, p. 99, Vol. II, p. 888, for years 1914-17. Includes those reporting to the Comptroller.

^b *Ibid.*, Dec. 1, 1930, p. 770.

^c *Ibid.*, Dec. 5, 1921, p. 762, for years 1918-21.

^d *Ibid.*, Dec. 10, 1926, p. 604, for years 1922-26.

^e *Ibid.*, Dec. 1, 1930, pp. 754-755, for years 1927-30.

TABLE F
TOTAL STATE BANKS (COMMERCIAL, SAVINGS, PRIVATE, AND TRUST COMPANIES)

| Year | Number in United States ^a | Number Suspended ^b | Percentage Suspended | Number Failed ^c | Percentage Failed | Liabilities of All Failed State Banks and Trust Cos. ^d | Liabilities of All State Banks and Trust Cos. | Percentage of Liabilities of Failed State Banks & Trust Cos. to Total |
|----------|--------------------------------------|-------------------------------|----------------------|----------------------------|-------------------|---|---|---|
| 1914 | 18240 | | | 96 | .52 | \$ 32,059 | \$15,489,207 ^d | .21 |
| 1915 | 18457 | | | 110 | .59 | 27,866 | 16,008,444 | .17 |
| 1916 | 19934 | | | 41 | .21 | 16,010 | 18,344,370 | .09 |
| 1917 | 20319 | | | 35 | .17 | 11,300 | 20,836,957 ^e | .05 |
| 1918 | 21175 | | | 25 | .12 | 10,258 | 22,371,496 | .05 |
| 1919 | 21388 | | | 42 | .20 | 9,611 | 26,880,529 | .04 |
| 1920 | 22109 | | | 44 | .20 | 18,954 | 29,667,855 | .06 |
| 1921 | 22764 | 450 | 1.94 | 330 | 1.43 | 96,125 | 29,153,528 | .33 |
| 1922 | 22140 | 309 | 1.38 | 364 | 1.62 | 95,933 | 29,719,567 ^f | .32 |
| 1923 | 21937 | 558 | 2.48 | 237 | 1.07 | 64,550 | 32,523,145 | .20 |
| 1924 | 21263 | 654 | 2.98 | 777 | 3.53 | 223,188 | 34,578,771 | .64 |
| 1925 | 20763 | 494 | 2.32 | 440 | 2.07 | 118,728 | 37,706,174 | .31 |
| 1926 | 20168 | 831 | 3.96 | 406 | 2.40 | 147,823 | 39,595,739 ^g | .37 |
| 1927 | 19265 | 571 | 2.88 | 689 | 3.45 | 206,635 | 41,550,615 | .49 |
| 1928 | 18522 | 434 | 2.29 | 413 | 2.18 | 125,784 | 43,066,089 | .29 |
| 1929 | 17794 | 578 | 3.15 | 480 | 2.63 | 134,156 | 44,732,281 | .30 |
| 1930 | 16827 | 1184 | 6.57 | 558 | 3.21 | 253,694 | 44,903,585 | .56 |
| Totals | | 6063 | | 5177 | | \$1,592,694 | \$526,627,541 | |
| Averages | | | 2.99 | | 1.49 | | | .30 |

1931

| | |
|----------------|-------------------|
| January..... | 175 |
| February..... | 63 |
| March..... | 71 |
| April..... | 46 |
| May..... | 63 |
| June..... | 139 |
| July..... | 77 |
| August..... | 128 |
| September..... | 252 |
| October..... | 413 |
| November..... | 135 |
| December..... | 1587 ^b |
| Totals..... | |

^a Computed from subtotals. They do not harmonize with the total number of banks as published for the years 1914-23.

^b *Seventeenth Annual Report of the Federal Reserve Board* (1930), p. 131, for years 1921-30. Data for 1931 are compiled from *Federal Reserve Bulletins* and the figures are preliminary. Only totals for 1931 are revised.

^c *Annual Report of the Comptroller of the Currency*, Dec. 1, 1930, p. 770.

^d *Ibid.*, (Dec. 3, 1917) Vol. 1, p. 91,^f or years 1914-17.

^e *Ibid.*, Dec. 5, 1921, p. 153, for 1918-21.

^f *Ibid.*, Dec. 10, 1926, p. 91, for 1922-25.

^g *Ibid.*, Dec. 1, 1930, p. 115, for 1926-30.

TOTAL NATIONAL AND STATE BANKS (INCLUDING COMMERCIAL, SAVINGS, PRIVATE, AND TRUST COMPANIES)

| Year | Total Banks in United States (June 30) ^a | Total Suspended ^b | Percentage Suspended | Total Failed ^c | Percentage Failed | Total Liabilities of All Failed Banks ^d | Total Liabilities of All Banks | Percentage of Liabilities of All Failed Banks to Liabilities of All Banks | Total Deposits of All Banks (June 30) ^e | Percentage of Deposits of Suspended Banks to Total Deposits of All Banks |
|-------------------|---|------------------------------|----------------------|---------------------------|-------------------|--|--------------------------------|---|--|--|
| 1914 | 26,765 | | | 117 | .44 | \$ 41,833 | \$26,971,398 ^f | .15 | | |
| 1915 | 27,062 | | | 124 | .46 | 40,633 | 27,804,130 | .15 | | |
| 1916 | 27,513 | | | 54 | .20 | 19,030 | 32,271,238 | .06 | | |
| 1917 | 27,923 | | | 42 | .15 | 16,582 | 37,126,763 | .04 | | |
| 1918 | 28,880 | | | 27 | .09 | 12,612 | 40,726,438 | .03 | | |
| 1919 | 29,123 | | | 43 | .15 | 10,107 | 47,615,447 | .02 | | |
| 1920 | 30,139 | | | 49 | .16 | 20,884 | 53,079,108 | .04 | | |
| 1921 | 30,812 | 501 | 1.60 | 358 | 1.15 | 113,426 | 49,671,890 | .23 | 35,742,000 | .55 |
| 1922 | 30,389 | 354 | 1.15 | 397 | 1.29 | 116,220 | 50,425,567 | .23 | 37,615,000 | .29 |
| 1923 | 30,178 | 648 | 2.10 | 274 | .90 | 84,626 | 54,034,911 | .16 | 40,688,000 | .46 |
| 1924 | 29,348 | 776 | 2.58 | 915 | 3.02 | 297,931 | 57,144,690 | .52 | 43,405,000 | .49 |
| 1925 | 28,839 ^g | 612 | 2.08 | 542 | 1.84 | 172,043 | 62,037,037 | .28 | 47,612,000 | .36 |
| 1926 | 28,140 ^h | 956 | 3.28 | 573 | 2.00 | 182,935 | 64,893,362 ⁱ | .29 | 49,733,000 | .54 |
| 1927 | 27,061 | 662 | 2.39 | 831 | 2.98 | 266,570 | 68,132,558 | .39 | 51,662,000 | .37 |
| 1928 | 26,213 | 491 | 1.84 | 484 | 1.81 | 159,689 | 71,574,328 | .22 | 53,398,000 | .26 |
| 1929 | 25,330 | 642 | 2.47 | 549 | 2.12 | 181,833 | 72,172,510 | .25 | 53,832,000 | .43 |
| 1930 | 24,079 | 1345 | 5.29 | 640 | 2.59 | 308,985 | 74,020,124 | .42 | 54,954,000 | 1.55 |
| Totals | | 6987 | | 6019 | | \$2,047,939 | \$889,720,799 | | \$468,661,000 | |
| Averages | | | 2.43 | | 1.24 | | | .23 | | .51 |
| 1931 ^b | | | | | | | | | | |
| Jan..... | 202 | | | | | | | | 78,130 | |
| Feb..... | 77 | | | | | | | | 35,123 | |
| Mar..... | 86 | | | | | | | | 35,285 | .07 ^a |
| Apr..... | 64 | | | | | | | | 42,417 | |
| May..... | 89 | | | | | | | | 43,963 | |
| June..... | 167 | | | | | | | | 196,951 | |
| July..... | 93 | | | | | | | | 196,951 | .36 ^a |
| Aug..... | 158 | | | | | | | | 41,354 | |
| Sept..... | 305 | | | | | | | | 182,248 | |
| Oct..... | 522 | | | | | | | | 236,511 | |
| Nov..... | 169 | | | | | | | | 479,891 | |
| Dec..... | 353 | | | | | | | | 69,402 | |
| Total | 2290 | | | | | | | | 1,759,484 | |
| 1931 ^b | | | | | | | | | | |
| Jan..... | 202 | | | | | | | | 78,130 | |
| Feb..... | 77 | | | | | | | | 35,123 | |
| Mar..... | 86 | | | | | | | | 35,285 | .07 ^a |
| Apr..... | 64 | | | | | | | | 42,417 | |
| May..... | 89 | | | | | | | | 43,963 | |
| June..... | 167 | | | | | | | | 196,951 | |
| July..... | 93 | | | | | | | | 196,951 | .36 ^a |
| Aug..... | 158 | | | | | | | | 41,354 | |
| Sept..... | 305 | | | | | | | | 182,248 | |
| Oct..... | 522 | | | | | | | | 236,511 | |
| Nov..... | 169 | | | | | | | | 479,891 | |
| Dec..... | 353 | | | | | | | | 69,402 | |
| Total | 2290 | | | | | | | | 1,759,484 | |

^a *Eleventh Annual Report of the Federal Reserve Board (1924), p. 120, for years 1914-24. June 30 for all years except 1915 (June 23) and 1918 (June 29).*

^b *Seventeenth Annual Report of the Federal Reserve Board (1930), p. 131, calendar years 1921-30. For 1931 data are compiled from Federal Reserve Bulletins. The totals for 1931 are revised.*

^c *Annual Report of the Comptroller of the Currency, Dec. 1, 1930, p. 770.*

^d *Seventeenth Annual Report of the Federal Reserve Board (1930), p. 90.*

^e *Computed.*

^f *Annual Report of the Comptroller of the Currency, Dec. 1, 1930, pp. 115, 131, 442-448.*

^g *March 25.*

^h *For month only.*

TABLE H

| Commercial Failures* | | | | |
|-----------------------|--------------------|---|------------------------|--|
| Year | Number of Failures | No. of Business Concerns in the United States | Percentage of Failures | Amount of Liabilities of Failed Concerns |
| 1892 | 10,344 | 1,172,705 | .88 | \$114,044 |
| 1893 | 15,242 | 1,193,113 | 1.23 | 346,780 |
| 1894 | 13,885 | 1,114,174 | 1.25 | 172,993 |
| 1895 | 13,197 | 1,209,232 | 1.09 | 173,196 |
| 1896 | 15,088 | 1,151,679 | 1.31 | 226,096 |
| 1897 | 13,351 | 1,058,521 | 1.26 | 154,332 |
| 1898 | 12,186 | 1,105,830 | 1.10 | 130,663 |
| 1899 | 9,337 | 1,147,595 | .81 | 90,879 |
| 1900 | 10,774 | 1,174,300 | .92 | 138,496 |
| 1901 | 11,002 | 1,219,242 | .90 | 113,092 |
| 1902 | 11,615 | 1,253,172 | .93 | 117,477 |
| 1903 | 12,069 | 1,231,481 | .94 | 155,444 |
| 1904 | 12,199 | 1,320,172 | .92 | 144,202 |
| 1905 | 11,520 | 1,357,455 | .85 | 102,676 |
| 1906 | 10,682 | 1,392,949 | .77 | 119,202 |
| 1907 | 11,725 | 1,418,075 | .82 | 197,385 |
| 1908 | 15,690 | 1,447,554 | 1.08 | 222,316 |
| 1909 | 12,924 | 1,486,389 | .80 | 154,603 |
| 1910 | 12,652 | 1,515,143 | .80 | 201,757 |
| 1911 | 13,441 | 1,525,024 | .81 | 191,062 |
| 1912 | 15,452 | 1,564,279 | .98 | 203,117 |
| 1913 | 16,037 | 1,616,517 | .99 | 272,672 |
| 1914 | 18,280 | 1,655,496 | 1.10 | 337,909 |
| 1915 | 22,156 | 1,674,788 | 1.32 | 302,286 |
| 1916 | 16,993 | 1,707,639 | .99 | 196,212 |
| 1917 | 13,855 | 1,733,225 | .80 | 182,441 |
| 1918 | 9,982 | 1,708,061 | .58 | 163,020 |
| 1919 | 6,451 | 1,710,909 | .38 | 113,291 |
| 1920 | 8,881 | 1,821,409 | .49 | 295,122 |
| 1921 | 19,652 | 1,927,304 | 1.02 | 627,402 |
| 1922 | 23,676 | 1,983,106 | 1.19 | 623,896 |
| 1923 | 18,718 | 1,996,004 | .94 | 539,387 |
| 1924 | 20,615 | 2,047,302 | 1.01 | 543,225 |
| 1925 | 21,214 | 2,113,300 | 1.05 | 443,744 |
| 1926 | 21,773 | 2,158,400 | 1.01 | 409,232 |
| 1927 | 23,146 | 2,171,700 | 1.07 | 520,104 |
| 1928 | 23,842 | 2,199,000 | 1.08 | 489,560 |
| 1929 | 22,909 | 2,212,779 | 1.04 | 483,250 |
| 1930 | 26,355 | 2,183,008 | 1.21 | 668,284 |
| Average for 1892-1930 | | | .97 | |
| Average for 1892-1913 | | | 1.00 | |
| Average for 1914-1930 | | | .90 | |
| Average for 1921-1930 | | | 1.06 | |

TABLE H (continued)

| Bank Failures and Suspensions ^b | | | | | | |
|--|--------------------|-----------------------|------------------------------|------------------------|----------------------|---------------------------------------|
| Year | Number of Failures | Number of Suspensions | Total Banks in United States | Percentage of Failures | Percentage Suspended | Total Liabilities of All Failed Banks |
| 1892 | 86 | | 9,338 | .91 | | \$ 23,794 |
| 1893 | 479 | | 9,492 | 4.80 | | 117,549 |
| 1894 | 86 | | 9,508 | .90 | | 50,480 |
| 1895 | 121 | | 9,818 | 1.22 | | 25,328 |
| 1896 | 137 | | 9,469 | 1.43 | | 19,240 |
| 1897 | 160 | | 9,457 | 1.51 | | 50,506 |
| 1898 | 60 | | 9,485 | .63 | | 10,887 |
| 1899 | 38 | | 9,732 | .39 | | 12,257 |
| 1900 | 38 | | 10,382 | .37 | | 21,733 |
| 1901 | 67 | | 11,406 | .58 | | 21,011 |
| 1902 | 45 | | 12,424 | .36 | | 10,712 |
| 1903 | 38 | | 13,684 | .28 | | 9,716 |
| 1904 | 122 | | 14,850 | .82 | | 38,154 |
| 1905 | 79 | | 16,410 | .48 | | 23,952 |
| 1906 | 45 | | 17,905 | .25 | | 8,790 |
| 1907 | 41 | | 19,746 | .21 | | 27,627 |
| 1908 | 156 | | 21,346 | .72 | | 232,253 |
| 1909 | 69 | | 22,491 | .31 | | 28,365 |
| 1910 | 34 | | 23,095 | .14 | | 21,075 |
| 1911 | 59 | | 24,392 | .24 | | 19,464 |
| 1912 | 63 | | 25,195 | .25 | | 17,322 |
| 1913 | 46 | | 25,993 | .18 | | 14,203 |
| 1914 | 117 | | 26,765 | .44 | | 41,833 |
| 1915 | 124 | | 27,062 | .46 | | 46,633 |
| 1916 | 54 | | 27,513 | .20 | | 19,030 |
| 1917 | 42 | | 27,923 | .15 | | 16,582 |
| 1918 | 27 | | 28,880 | .09 | | 12,612 |
| 1919 | 43 | | 29,123 | .15 | | 10,107 |
| 1920 | 49 | | 30,139 | .16 | | 20,884 |
| 1921 | 358 | 501 | 30,812 | 1.15 | 1.16 | 113,426 |
| 1922 | 397 | 354 | 30,389 | 1.29 | 1.15 | 116,220 |
| 1923 | 274 | 648 | 30,178 | .90 | 2.10 | 84,626 |
| 1924 | 915 | 776 | 29,348 | 3.02 | 2.58 | 297,931 |
| 1925 | 542 | 612 | 28,839 | 1.84 | 2.08 | 172,043 |
| 1926 | 573 | 956 | 28,146 | 2.00 | 3.28 | 185,935 |
| 1927 | 831 | 662 | 27,061 | 2.98 | 2.39 | 266,570 |
| 1928 | 484 | 491 | 26,213 | 1.81 | 1.84 | 158,689 |
| 1929 | 549 | 642 | 25,330 | 2.12 | 2.47 | 181,833 |
| 1930 | 640 | 1345 | 24,079 | 2.59 | 5.29 | 308,985 |
| Average for 1892-1930 | | | | 1.01 | Av. 2.43 | |
| Average for 1892-1913 | | | | .59 | | |
| Average for 1914-1930 | | | | 1.24 | | |
| Average for 1921-1930 | | | | 1.97 | | |

TABLE H (continued)

| Commercial Failures | | |
|---------------------|--------------------|--|
| 1931 | Number of Failures | Amount of Liabilities of Failed Concerns |
| Jan. | 3,316 | 94,608,212 |
| Feb. | 2,563 | 59,607,612 |
| Mar. | 2,604 | 60,386,559 |
| Apr. | 2,333 | 50,868,135 |
| May | 2,248 | 53,371,212 |
| June | 1,993 | 51,655,648 |
| July | 1,983 | 60,997,853 |
| Aug. | 1,944 | 55,025,132 |
| Sept. | 1,936 | 47,255,650 |
| Oct. | 2,362 | 70,660,436 |
| Total | 23,332 | 607,436,444 |

^a *Dun's Review*, Jan. 10, 1931, pp. 6-7, Jan. 8, 1921, p. 18, and current *Reviews* for 1931 data.

^b Compiled from Tables F and G in Appendix, and from *Annual Report of the Comptroller of the Currency* (Dec. 3, 1917), Vol. I, pp. 74-75, 112.

DISCUSSION

FREDERICK A. BRADFORD.—I am sure that we are indebted to Professor Bell and Professor Spahr for their interesting and stimulating papers. I agree with much that has been said by both speakers. There are a few points, however, which I should like to discuss, and, as my time is short, I shall confine my remarks largely to analyses or conclusions with which I am in disagreement or which appear to me to merit further emphasis.

The analysis of deposits by the individual banker, which Professor Bell has suggested as a means of conducting a sounder banking business, is important and, in my opinion, has not hitherto received adequate emphasis. There is only one point which I should like to question in this connection. Professor Bell stated that "business or commercial accounts . . . result from borrowings by corporate and other enterprises which are negotiated through an exchange of business paper for bank credit. The bank's reserve problem is largely concerned with these since business accounts are fluctuating and active, highly sensitive to slight changes in business conditions and in public confidence."

In the first place, not all business deposits result from borrowings by business enterprises. The larger corporations of the country have not been, generally speaking, greatly in debt to the banks for several years past, yet many of them have maintained large, often excessive, bank balances which would certainly be classified as business deposits. Also, the business deposits created at times, as in 1927, as a result of open market purchases by the Reserve banks do not result from borrowing operations. I believe this point to be important because deposits of this nature which are not a result of commercial borrowing present a difficult investment problem, the banker being inclined to divert such funds into investment channels in view of the slackened demand for commercial accommodation.

In the second place, I doubt if business deposits are often highly sensitive to changes in public confidence. It is the savings and income accounts, on the whole, which have been withdrawn during this past year in large amounts, while business deposits have been much more stable. It should be added, however, that if bank failures continue on a wide scale, business concerns, as well as individuals, will be increasingly likely to withdraw their accounts and hold currency or gold.

I have no other comment to make on Professor Bell's paper, except that I should like to endorse his approval of the recommendations of the Committee on Bank Reserves. I do not agree with the opinion of the Committee that member bank reserves play little or no part in insuring the liquidity and solvency of the member banks, for I believe that required reserves can and should function in this capacity. This is not, however, a criticism of the proposal itself which seems to be eminently satisfactory.

In Professor Spahr's analysis of the causes of bank failures, I feel that he has failed sufficiently to distinguish between those causes which are of far-reaching importance and those which are of minor or secondary significance. Thus, in the discussion of the defects which are inherent in the organic structure of our commercial banks and banking system, no particular stress is laid on any one or more of the eleven defects described, yet it seems apparent

to me that the poor quality of the management, of the smaller banks especially, is of outstanding significance, while the variety of jurisdictions under which our banks operate, the excessive number of banks, and, in some states, the inferior brand of bank supervision, are also more important than the other seven defects. If those mentioned could be remedied, the others would largely take care of themselves. I have little sympathy, for example, with the notion that it is impossible for a bank in a one-crop region to diversify its business. Under sound management such a bank would insist on holding a fair proportion of its resources in open market paper and high-grade, marketable bonds, while confining its local loans to the very best risks. I also question the increase in investments, per se, as a legitimate cause of bank failures. So long as the investments are in local mortgages, the bank does not, it is true, strengthen its position, but probably weakens it. Investment in high-grade, marketable securities, however, merely by helping to attain diversification, would have tended to decrease rather than to increase the number of small country bank failures during the period prior to 1930. Finally, although I am quite aware of the danger of investment affiliates of commercial banks, I am not convinced that they have played any great part in the recent debacle of bank failures, except in the case of the Bank of the United States.

Inadequate control of credit by the Federal Reserve authorities—Professor Spahr's second major cause of bank failures—seems to me to have been somewhat overemphasized. It is possible that more scientific reserve requirements for member banks, of the sort recommended by the committee on bank reserves already referred to, might have prevented a part of the speculative excesses which brought many country banks into difficulties, and that more timely action by the reserve authorities might, at times, have improved the banking situation. It seems probable, however, that the majority of bank failures which did occur would have occurred in any event, having had their origin largely in other sources, and that the inadequacy of credit control by the reserve authorities has been, at best, a cause of minor significance. Not that the problem of credit control is not of vital importance, quite the contrary, but I am inclined to doubt its relevance to the present discussion.

It is in the causes lying outside the banking field that the most potent source of our recent banking difficulties is to be found. The list of such causes presented by Professor Spahr is entirely satisfactory, my only objection being that I feel it to have been deserving of more emphasis, in relation to the other causes, than it received.

With regard to the possible correctives of the unsatisfactory banking situation in this country, it seems to me that permissive branch banking on a rather wide scale and higher capital requirements for unit banks are more expedient than the other changes which Professor Spahr has suggested and would probably secure the desired results. I never tire of quoting Hartley Withers to the effect that "good banking is produced, not by good laws, but by good bankers." When the bankers of this country, taken in the aggregate, learn that their first duty is to their depositors, not their borrowers, and that no loan or investment which jeopardizes the safety of their depositors' funds is justified, there will be comparatively few failures, whatever the banking laws may be.

Theoretically, the smallest unit banks can be soundly run, but often, in practice, they are not. It would seem desirable, therefore, to permit branch banking and to raise the minimum capital requirements for unit banks as the most probable and expedient methods of securing by legislation the type of bank management which is essential to a good banking system.

G. W. DOWRIE.—The two papers to which we have just listened raise the question as to how failure-proof we have a right to expect our banking system to be. It is usually conceded that there have been occasional bank failures that could scarcely have been avoided by the most skillful management. The unblemished record of the English banking system, however, and the ability of certain of our American banks to carry on successfully in situations to which their competitors have succumbed warrant a strict insistence upon our building up a banking system which is virtually immune from failure.

It is obvious that ours is a fair-weather system. In spite of its weaknesses it makes a fairly good showing when economic conditions are stable, but in time of crisis, particularly one whose severity is greatly multiplied by the hideous aftermath of a world war, only the superior institutions are able to survive.

Even if we insist that banks should be able to weather any sort of condition that comes, it is only fair to them as it is to other members of our economic organization that sound and effective mechanisms be devised for the stabilization of business at home and that the closest international financial co-operation be fostered to the end that external disturbances may be reduced to a minimum.

I quite agree with the two papers, however, that even with a stable economic environment our banking system needs considerable improvement. We must not, however, fall to worshipping mechanisms such as laws, regulations, and external supervision. The only dependable method for achieving better banking is to develop better bankers. Sound banks are not necessarily member banks, national banks, branch banks, or large banks. When all of the acts of the present banking tragedy have been written it will be found that no type or system of banking was free from the recklessness, greed, stupidity, and dishonesty which have been present in the existing situation. It goes without saying that a bank with larger resources, more careful supervision, greater opportunity to diversify risks, and ability to command better managerial talent, other things being equal, will be better able to weather storms but even such an institution will subject the stockholders and patrons to heavy losses unless it is wisely and honestly managed. The ability, conservatism, and highly developed sense of stewardship of the English banks are enabling them to weather unperturbed storms even more violent than our own banks are encountering.

While there is much to be said for a single national system of banks the case is not quite so one-sided as Dr. Spahr would have us believe. We have already dumped upon the central government so many of our local problems that it is unable to grapple with them effectively. While some of our state laws and supervision systems are not quite up to the standards of the national system I have found that the plane upon which banking is done in any given

community is pretty much the same for national and state banks. The existence of a dual system has permitted better adaptation to local needs and, through the interchange of ideas, has resulted in greater progress. As has been the case with state-wide branch banking, one state, California, has served as the laboratory without the whole country having been subjected to the necessity of experimenting with a new type of banking structure.

I quite agree with Dr. Spahr that the small bank should be eliminated, branch banking be given a somewhat freer hand, that stricter, as well as more scientifically devised, regulations be made with respect to loans, deposits and reserves, and that a better type of supervision be provided. It is still desirable to emphasize the fact, however, that the best of regulations and the ablest of supervision will not make our banks failure-proof in the face of stupid and dishonest management.

Dr. Spahr's insistence that every commercial bank should belong to the Federal Reserve system meets with my approval provided he confines the term "bank" to those institutions that are commercial in fact as well as in name. Many of those banks that are still outside of the system do so small a volume of commercial banking as scarcely to warrant Reserve bank membership.

As for the stricter regulation of the investment departments and investment affiliates of banks, I would go a step further and insist that unless this type of financial service can be rendered without bringing distrust upon the whole institution it might better be denied to our banks. The department store idea in finance is in itself a thoroughly commendable one and I see no fundamental reason for denying to either qualified national or state institutions the right to engage in the whole gamut of financial services, provided that a uniformly high standard is maintained in every department.

I share Professor Bell's high opinion of the changes in the reserve requirements proposed by the Committee on reserves of the Federal Reserve system. Our present antiquated classifications and rigid system of percentages have to some extent defeated the very purposes for which legal reserve requirements are prescribed. One is inclined to wonder, however, if the Committee has not been too liberal with respect to the leeway given to banks outside of Federal Reserve cities regarding the location of their reserves. Furthermore, since the committee's test period expired, an extraordinary situation has arisen in which in the face of an increase of currency due to hoarding there has been a decline in both the volume and activity of deposits. In such a situation, the member reserve requirements do not constitute a check upon expansion.

My conclusion is that we should perfect our banking laws and the quality of supervision to the highest degree but that we should regard these as only of minor importance in our quest for a failure-proof banking system. This latter condition we cannot achieve until we have placed only good bankers in charge of all of our banking institutions.

JOHN F. BELL.—I am very much impressed with the two papers just presented. Anyone the least bit familiar with statistics on banks and banking will appreciate the difficulties encountered by Professors Bell and Spahr in working up their data. I feel that the material has been handled very skillfully. Professor Bell has presented helpful material pertaining to our bank reserves

and has brought out the economic importance of revision of our present laws pertaining to reserves. I think that the present suggested changes in reserve requirements of banks, however helpful they may be, can at best be only a temporary relief. They are attempts to cure only one part of a diseased body, when probably the entire system needs medical attention. Professor Spahr's paper on bank failures builds a very strong case for bank reform. It is likely that we shall pull through this present depression in a year or so and shall then feel that our banking system is not so bad after all. However, the record of the past ten years will stand as a monument to costly experimentation. We have witnessed the inadequacy of our banking laws to meet national emergencies. I am well aware that, as has been pointed out, banking laws do not make good banking, but that good banking is attributable to the bankers themselves. Yet we have drawn up for the bankers elaborate codes which would attempt to set strict limits on the bankers. That these limits have been overstepped is common knowledge. The one paramount object to be desired in any banking system is adequate and safe banking. It is hard to conceive how this can be achieved with forty-eight different experiment stations, each with its own individual laws, as we have in this country. I am in accord with Professor Spahr's contention that a system of branch banking is a solution. I do not believe that branch banking is a panacea, yet I feel that it would provide a united front which might offer an opportunity for uniformity of control. Banking, as now carried on, is essentially interstate in character. We have been altogether too individualistic and unco-operative in this business, as is witnessed in practically every banking community of the entire country. I feel that the price which is now being paid is altogether too high for a perpetuation and continuation of our present costly system. The problem is immediate and the sooner we can aid and encourage banking reform the sooner we shall be relieved of one of the real causes which have aided in bringing about a national calamity.

HOWARD H. PRESTON.—With a limited amount of time at my disposal it is impossible to consider all of the many points raised by the very able and suggestive papers of Professors Spahr and Bell. Consequently my comments will be limited to a discussion of problems of banking structure as presented by Professor Spahr.

Experience in recent years has demonstrated the soundness of Professor Spahr's proposal for rigid supervision of non-commercial banking affiliates. I agree with him also regarding segregation of savings deposits and their investment along lines laid down in the best savings banking laws. It is true, however, as Professor Bell has so ably brought out in his analysis of the nature and classification of bank deposits, that time deposits are by no means homogeneous. A sound segregation law should limit the protection to savings accounts and should not include all classes of time deposits, which may include large capital accounts. More than twenty years of experience have convinced the public and most bankers in California and Oregon of the advantages of segregation even when handicapped by unsatisfactory classification of accounts.

In advocating the abolition of state banking systems and the extension of

branch banking Professor Spahr deserves congratulation for his straightforward and courageous stand.

The proposal to bring all commercial banks under national control is not new, but was brought into prominence some months ago when advocated by Owen D. Young before the Senate Committee on Banking and Currency. It must be admitted that Gresham's law has operated in the field of banking. There has been open to bankers the choice of two codes under which they might operate their banks. Too often they have chosen the one with lower capital requirements or looser supervision. Our overbanked condition in many states can be attributed to laxity in laws and the competition for numbers under two systems. Against this must be set the gains from a developmental point of view of experimentation and freedom from monopolistic control of banking resources.

If we concede that Congress has the power to establish a single banking system, we must still recognize that much straw must be threshed before such a far-reaching proposal can become the law of the land. Meantime, as a practical proposition, it seems most desirable to move in the direction of a single system through standardization of state banking legislation and supervision. Modern control of state banking is relatively new. The pre-Civil War state laws were rendered obsolete by the passage of the national banking act, especially the amendment taxing the state bank notes out of existence.

Existing banking codes in the seven states comprising the Twelfth Federal Reserve District are barely a quarter of a century old. The same condition, with modification, is typical generally. In recent years the trend of state legislation and supervision has been toward decidedly higher standards. The old competitive spirit has disappeared. In its stead we find co-operation with the comptroller's department and a desire to bring the laws up to the best standards of the national banking act. In the matter of capital alone, states have adopted the minimum requirements of the national law.

In my own state of Washington the past decade has witnessed a distinct trend toward co-ordination of banking policy. Perhaps more real progress may be made by concentrating our energy upon bringing up the standard of state banking than in looking toward the ideal but somewhat distant and uncertain goal of a single national system of commercial banking.

Professor Spahr's proposal for branch banking deserves support. Moreover, we should establish a national policy upon branch and group banking. The McFadden Act in substance declared against intercommunity branch banking and left our national banks subject to state legislation in the establishment of city branches. The result is that in many cities where branch banking is illegal, e.g., Seattle, group banking has become the dominant form. It is generally conceded that branch banking would be more economic if permitted. The result of the present laws is to give us groups, many of which are equivalent to branches.

Multiple office banking—whether in the form of an administratively centralized group or a branch system—may bring greater safety and stability. Group banking has been a source of strength to banks in the Ninth Federal Reserve District in recent months. The Union Securities Company of Spokane and its successor, the Old National Corporation, have brought all of the banks

they controlled through the past decade of economic readjustment without loss. One of the leading lumber manufacturing communities in Washington has sustained two bank failures in recent weeks. The sole remaining bank in the largest city of the district is a member of a strong group with headquarters in Seattle. Its group affiliation has unquestionably contributed to public confidence in its stability.

Branch and group banking can offer better, as well as safer, banking service to the small community. In fact, it appears necessary, if some of our small towns are to have local banking facilities, to permit branch banking in some form. The solution ordinarily proposed for our overbanked condition is consolidation. Many real gains have been achieved by consolidation, but the limits of consolidation are fairly soon reached. Numerous small towns are already down to a single bank. For instance, a check of the banks in operation in Washington at the end of 1928 showed 162 out of a total of 347 state and national banks operating in towns where there was no other bank. Many of these were substantial and prosperous banks, but a large number were too small to operate successfully on the banking business alone.

Sixty-six of the 162 banks in question had total resources of less than \$200,000; 9 were below \$100,000 in total resources. Only 27 of the 162 banks having the local field to themselves were in the half-million dollar class or above. What can be done with the one-bank town where the bank is too small to provide safe and profitable banking service to the community? Two solutions appear to be possible: intercommunity consolidation, or branch banking.

The state banking department in Washington has adopted a general policy of fewer and stronger banks. (The majority of small banks were state chartered.) Working constructively upon this policy, the department has been able to complete only three intercommunity mergers. It would not be a serious hardship in many more cases to merge banks so that they would be limited to trade areas of sufficient size to support a bank adequately.

It is inevitable, however, that the agricultural sections of the United States and Canada will have a larger number of banking offices. Despite the widening of the trade area by improved roads and the use of the automobile, the small town is still the center of business and social life to a large proportion of our rural population. Canada, today, has almost double the number of banking offices per capita that we have in the United States. A branch bank can be maintained far more economically than an independent bank. This points to branches as a method of providing banking services to small towns. Some states, e.g., Iowa, have already authorized branch "banklets"—branches only in towns where no independent bank is in operation.

While recognizing the extension of branch banking as inevitable and desirable, an analysis of the recent past suggests that we must proceed with caution. Branch and group systems have been thrown together too rapidly. Systems have been extended faster than the units could be integrated. Life-long unit bankers have been tempted by high prices for their banks and higher salaries than they have dared to pay themselves to become part of a group or branch system. But they cannot adjust overnight to the new order of things.

The normal procedure in building branch systems in California has been through purchase of existing banks. Group systems have been formed in the same manner. Often the price paid was exorbitant. Speculation in all bank stocks was a characteristic of the "new era" days that ended in the closing weeks of 1929. Branch and group systems were especially subject to speculative interest. The burden of the excessive purchase price of banks was partially passed on to the public.

Today we may find branch systems loaded with heavy overhead, controlled by absentee owners, unable to unify and co-ordinate the management and operations. The making over of a system of unit banking into branch banking will bring in its train grave problems. It will require decades, not years, to accomplish it successfully.

Sooner or later Congress must decide a national policy regarding branch and group banking. The information obtained at the 1930 and 1931 hearings of the House and Senate Committees will soon be supplemented by the findings of the Federal Reserve Board's Committee on Branch, Group, and Chain Banking. With this and other available information a sound policy should be formulated. In the formulation of this policy bankers must assist, but not dictate. Senator Glass has said that all of the opposition to branch banking has come from bankers and bankers' organizations.

Some of that opposition is gone. One of the most militant antibranch banking organizations was the Chicago and Cook County Bankers' Association, composed principally of outlying banks. Wholesale failures have depleted its ranks; its secretary, who led the fight for the Hull amendments to the McFadden Act which delayed passage of that bill, has found employment elsewhere. The California League of Independent Bankers has dissolved. Less partisanship has been the rule in bankers' associations recently.

Perhaps the first branch banking question to settle is the area over which a bank may extend its branches. City branches should be allowed universally without regard to state law. The dream of nation-wide branch banking is over. Probably the first step should be to limit branches to state lines or contiguous territory. Trade area branches may be feasible if the trade area is narrowly defined at first. In any event, branch expansion should be subject to restriction and control.

Group banking should be brought strictly under the supervision of the comptroller where any member of the group is a national bank. Soundly managed groups add strength. The evils of unsound management have been demonstrated in such groups as the Bankers' Holding Corporation of Seattle, or the Caldwell group of Nashville. These experiences demonstrated that group membership may be a disastrous liability to a successful local bank drawn into weak or speculative company through group affiliation.

Finally, I would agree heartily with the previous speakers who have stressed management as a solution of bank failures. Thousands of unit banks have successfully weathered the storm and stress of 1930 and 1931, years whose wholesale failures have brought condemnation upon our present system. At the same time, poorly-administered branch and group systems have gone down with disastrous results. A changed banking structure alone, therefore, would not be a guarantee of stability.

SESSION ON THE CHANGING CHARACTER OF THE TRANSPORTATION SYSTEM

TRANSPORTATION BY RAIL AND OTHERWISE

By J. B. EASTMAN

Interstate Commerce Commission

This is a personal statement and in no way an official pronouncement in behalf of the Commission of which I am a member. The present railroad situation furnishes wide opportunity for discussion. In the limited time available I shall confine my comments to a single phase.

The economic depression has brought grief to the railroad industry, as it has to most other industries. Severe shrinkage in traffic has produced like shrinkage in earnings, to the distress of investors. This distress has been augmented by fear that much of the decline in traffic is due, not to the depression alone, but to new and growing competition with other forms of transportation, and hence may be permanent. We hear it said that the railroad industry has changed from a monopolistic to a competitive industry. It is even suggested that because of this change it may be well to relieve the railroads in large measure from what is said to be the heavy burden of public regulation.

Before discussing the present competition, let me, in the interests of historical accuracy, point out that competition has always been a most important factor in the railroad industry of this country, to such an extent that railroads have often been its victims. A recent examination into the matter leads me to say without hesitation that from the time when public regulation of railroads began, it was directed quite as much against evils resulting from competition as against evils resulting from monopoly. In the early decades of our railroad history a strictly laissez faire policy was followed. Competition was the sole regulating force relied upon. Railroad construction and the competition of railroads with each other were encouraged to the limit, often by liberal federal, state, or municipal grants in aid of construction. Competition with water carriers also existed. State attempts at regulation began in the sixties, and the Interstate Commerce Commission was established in 1887; but there was no effective regulation of interstate rates until early in this century.

The laissez faire policy had two marked results. One was the financial ruin of many railroads. The other was the creation of widespread and most flagrant discriminations in railroad rates and charges. It may be that holders of railroad securities long for the "good old days" when railroads were free from the curse of public regulation. If so, they have not read their railroad history. As a result of the policy of free construction, open competition, and non-regulation, a host of railroads went

bankrupt following the panic of 1873. In 1891 the English writer, Acworth, gave this example of the results of unrestrained American railway competition:

Between Chicago and Cairo, a distance of 365 miles, there are 22 railway companies whose lines cross that of the Illinois Central. Eighteen out of 22 passed into the hands of receivers since 1874.

In 1888, Charles Francis Adams wrote:

That the general railroad situation of the country is at present unsatisfactory is apparent. Stockholders are complaining; directors are bewildered; bankers are frightened.

In 1893, Schoonmaker, a former member of the Commission, said:

Volumes have been written upon the evils of competition; millions of dollars have been spent upon compacts between railroads in futile attempts to regulate competition; and millions more have been sacrificed every year in the strifes of ruinous competition. But the evil will go on until the power that works the mischief is brought into subjection.

In 1897, a writer in the *New York Sun* described the "Plight of the Railroads" as follows:

Loss of earnings, reduction of rates below the paying point, actual loss on passenger traffic, deterioration of roadbed, reduction in the number of employees, others working half time, receiverships, foreclosure sales, practically half of this enormous investment bringing no returns, and the blight of insolvency settling down upon our entire system.

Going into more detail he said:

The latest report shows that 70 per cent, or over two-thirds (an aggregate of nearly \$3,500,000,000), of all the outstanding stock of these corporations paid nothing in 1895. The same is true of 17 per cent of the bonds. A careful study of these railway budgets would bring out the appalling fact that probably half of these investments are non-productive—certainly five thousand millions of them. The gloomy list of non-dividend-paying stocks has of late years been gaining from about 60 per cent ten years ago to upward of 70 per cent now.

The effect of unregulated competition upon the railroad users was thus summarized by Charles Francis Adams, who had had experience both as a railroad commissioner of Massachusetts and as president of the Union Pacific Railroad:

There were certain localities in the country known as railroad centres; and these railroad centres were stimulated into an undue growth from the fact that competition was limited to them. The principles of free trade did not have full play; they were confined to favored localities. Hence resulted two things: in the first place the community suffered; then the railroads. Under

the hard stress of local and through competition the most glaring inequalities were developed. The work of the railroad centres was done at a nominal profit, while the corporations recompensed themselves by extorting from other points where competition did not have to be met, the highest profit which business could be made to pay. It thus gradually became apparent, although men were very slow to take in the fact, that immense and invaluable as were the results in many respects secured through unlimited railroad competition, yet so far as the essential matter of securing to all reasonable and equal rates of payment for similar services performed was involved, it did not produce the effect confidently expected of it. On the contrary, it led directly to systematic discriminations and wild fluctuations, and the more active the competition was, the more oppressive the discriminations became and the less possible was it to estimate the fluctuations.

In the eyes of those managing them the railroads were mere private money-making enterprises. They acted accordingly. If they were forced to compete, they competed savagely and without regard to consequences;—where they were free from competition, they exacted the uttermost farthing. There naturally ensued a system of sudden fluctuations and inequitable local discriminations which has scarcely ever been equalled and which was well-nigh intolerable.

Besides all this, however, competition led to favoritism of the grossest character—men or business firms whose shipments by rail were large could command their own terms, as compared with those whose shipments were small. The most irritating as well as wrongful inequalities were thus made common all over the land.

The widespread practice of rebating which existed until 1906 and its baneful effects are too well known to require comment. The books and discussions of the eighties and nineties are full of the evil consequences of unregulated competition both to the public and to the railroads, and they dilate upon the difficulty if not impossibility of avoiding such consequences without the intervention of public authority.

I have indulged in this reference to history for two reasons: first, to show that there is nothing new about competition in the transportation industry; and, second, to indicate its dangers unless brought under effective public control. Two other facts demonstrated by railroad experience should be mentioned. One is that competition is likely to be especially severe and destructive in a time of economic depression, and the other is that the most dangerous and unprincipled competitors are usually those which are in the worst financial condition.

The present competition in the transportation industry differs from that of the past in at least one important respect. Heretofore competition has chiefly been among the railroads themselves, with the exception of some competition from water carriers. There has now been added the direct competition of highway motor vehicles, pipe lines, and airplanes, and the indirect competition of electric central power stations and trans-

mission lines. A further new feature is that to a very important extent, in the case of motor vehicles, this competition is not offered by common carriers but by vehicles owned or hired by the users. The privately-owned automobile has had a more serious effect than the common-carrier bus upon railroad passenger traffic, and trucks owned or hired by shippers have likewise had a more serious effect than common-carrier truck lines upon railroad freight traffic.

Railroad passenger traffic has suffered very severely from the new competition. In an exhibit recently filed in a case now pending, Professor Cunningham of Harvard University estimates that in the five years, 1921-25, the freight traffic of railroads in the Eastern District earned 4.994 per cent on the Commission's tentative valuation and their passenger traffic 2.690 per cent. In the five years, 1926-30, the corresponding earnings were 6.678 per cent for freight and 0.778 per cent for passenger. In the Southern District the earnings in the first period were 6.157 per cent for freight and 1.828 per cent for passenger, whereas in the second period they were 7.038 per cent and a deficit of 2.787 per cent, respectively. Any one interested in specific illustrations of the inroads made by the new forms of competition on railroad freight service will find much data in the last annual report of the Commission at pages 98-107, inclusive.

It is plain that the new competition is and will continue to be a factor in railroad operations which must be reckoned with. However, the "plight of the railroads" is by no means a new topic of discussion. In their long history there have been many plights from which the railroads have safely emerged. There are many measures that can be taken to meet the new conditions and protect railroad earnings. On the one hand there are changes in railroad policies and methods, and on the other, legislation. Both are important, but the changes in policies and methods are probably the more important. As a preliminary to the discussion which follows, it is no doubt unnecessary to say that I am not an expert in railroad operation. None of the suggestions which I shall offer is original with me. They are largely gleanings from the thought of others.

I have referred to the competition of railroads with each other which for many decades was so savage and disastrous. The strengthening of the federal regulatory statutes, which began in 1906, continued in 1910, and culminated in 1920, greatly improved this situation. Direct rebates have been abolished, and while rate wars have threatened from time to time, they have practically been eliminated. Keen competition between railroads, however, still exists, and it exercises an adverse effect on aggregate earnings through both service and rates. It increases cost of service in many ways—through unnecessary duplications, circuitous routing, expensive solicitation and advertising, wasteful terminal opera-

tions, unremunerative storage of freight, undue liberality in various allowances to shippers, laxity in enforcement of demurrage rules, and the like. In the case of rates, the ability of large shippers located at traffic centers to shift traffic from one rival route to another, popularly known as the "traffic club," leads at times to unwarranted reductions but more often to a timidity in initiating increases which are capable of justification. Of late the competition which produces such results, in both service and rates, has shown a tendency to become more intense rather than the reverse.

The thought suggests itself that the rapidly growing competition from outside sources furnishes a compelling reason which has not hitherto existed for some abatement of competition within the railroad industry; that is to say, for a greater degree of co-operation on the part of railroad managements which will reduce competitive wastes in service, and thus lower costs materially, and also reduce timidity in dealing with various rates. In the past such co-operation might have led the public to fear that it would mean loss of enterprise and pave the way to extortion. But now the existence of aggressive competition from other forms of transportation would seem to furnish a safeguard against such results. It is, in other words, a peculiarly appropriate time for the railroads to abate civil strife and unite in common defense against the enemy at the gate.

This will involve a change of policy on the part of executives running counter to railroad traditions which are bred in the bone, but the circumstances now existing recall Benjamin Franklin's observation to the signers of the Declaration of Independence that if they did not hang together they would all hang separately. In view of the present provisions of the Interstate Commerce Act, particularly with respect to pooling, it may be doubted whether the law furnishes any obstacle to such co-operation; but if need be, the law can be revised.

The necessity for the co-operation which I have in mind exists particularly as to passenger traffic. Certainly that service must have drastic treatment. It is impossible to blame its financial weakness upon public regulation. Not a soul suggests that any relief can be obtained from an increase in fares, with the possible exception of commutation fares. Yet the earnings are such that it burdens all other forms of service. Clearly the pooling of traffic and the joint use of facilities in every feasible and reasonable way, with a view to the elimination of all unnecessary duplication in service and expense, is one remedy which is indicated. And although the need may not be so great in the case of freight service, the situation as to less-than-carload traffic is very like the passenger situation, and there are many opportunities for savings which apply to all freight traffic. Co-operation can no doubt be extended with advantage also to research and experimentation with new kinds of equipment and

methods of service and to a greater degree of standardization and better specifications in the purchase of equipment, materials, and supplies.

This last suggestion leads into the topic of changes in forms and methods of service. The motor truck has introduced elements of flexibility and convenience in transportation which are highly valued by shippers. It has come to stay, as has the pipe line, airplane, and electric transmission line, and of course the steamship and barge line. The prime problem for railroad managers is to determine to what extent these apparent enemies, and particularly the motor truck, can be used as auxiliaries and allies to supplement and improve strictly railroad service. Much has been done along these lines by some railroads, but the possibilities are vast. Progress is slow and is hardly beyond the early experimental stage. It could, I believe, be accelerated by co-operation. Phases of the problem are the substitution of busses or trucks for train service where the traffic is light; store-door receipt and delivery; the development and use of containers, demountable truck bodies, and other new forms of equipment; the standardization of such new equipment for use on all roads; and the simplification and speeding up of terminal operations through the auxiliary use of trucks.

There are other changes in service, not connected with the use of motor highway vehicles as auxiliaries, which may be anticipated. The indications are that attention will be devoted to the more economical and efficient handling of less-than-carload freight, with the growing realization that the huge modern cars designed for heavy loading of carload freight are not well adapted to the package business. It may be that this business can be handled to better advantage by the Railway Express Agency, which might at the same time absorb the functions of the car-forwarding companies. There are like indications of possible radical changes in the methods of handling the passenger business, perhaps embracing developments in the use of speedy, light units with self-contained power.

It will be necessary to consider rates as well as service. So far as line-haul is concerned the railroad is greatly superior in economy to the truck if the freight moves in any considerable volume. It is in terminal operation that such superiority as the truck has chiefly lies. In the case of long hauls the railroad economy in line operation overcomes the cost of its terminal operations. It may not do so in the case of short hauls, and hence the desirability of employing the truck as a substitute or auxiliary. But even where the railroad has an advantage in cost for the entire service, this advantage may not be reflected in the rates, because railroad freight rates have been influenced to a very considerable extent by what the traffic would bear or, as it is often called, the "value of the service." This may mean relatively high rates in proportion to cost, with the result that the truck is given an opportunity to compete which

might not otherwise exist. It is in many ways a disquieting thought, yet I cannot avoid the conclusion that just as the new competitive conditions must lead to changes in forms and methods of service, so they must also lead to some considerable reconstruction of the rate structure. As in the case of service, this reconstruction will be more radical for less-than-carload than for carload traffic.

With respect to both service and rates, however, certain dangers are involved in the process of reconstruction. In the case of service I have suggested the possible and desirable use of the bus and truck as auxiliaries and allies. This will put the railroads into the motor-vehicle business, and some of them are already in it, through resort to subsidiary companies. There is danger that the railroads may use these subsidiaries, not solely to supplement and improve their own service, but to establish fighting lines for the elimination of their competitors. In the case of rates, there is like danger that the reconstruction may go beyond the point of a reasonable meeting of competition and be directed to its elimination through rate wars which will cast a burden upon other railroad traffic. By such manipulation of rates in days gone by the railroads drove the packet boats almost completely off the inland waterways.

There is always danger to the public in uncontrolled competition where one party must depend wholly upon the competitive business for subsistence, while the other has the advantage of a large volume of noncompetitive business which can be used to carry a part of the cost. Under such circumstances the competitor with the lesser resources may be driven out of business at the expense of the noncompetitive traffic. Nor is this the only danger in unregulated competition. It may easily, as in the past, lead to all manner of unjust discriminations and to an instability in rates which is destructive of sound industrial conditions.

This brings me to the extension or modification of public regulation as a means of improving the present railroad situation. It is a difficult problem, and I doubt whether any one has yet thought it through. There are those who contend that the railroads are greatly hampered in their operations by burdensome public restrictions, and that they ought to be relieved from all or part of this load in view of the new competitive conditions. Upon this point my mind is quite open, but those who so contend ought not to stop with vague generalizations. What are the particular restrictions which they deem so burdensome? As yet I have seen very little in the way of specifications.

What I shall say upon this point will be confined to the federal law. I doubt whether the railroads wish relief from the safety statutes, or from regulation of their security issues, of the construction of new lines, of the abandonment of old lines, or of acquisitions of control and consolidations. Possibly they dislike certain features of the regulation of

accounts, but I question whether they wish it eliminated. So far as service is concerned, there is practically no federal jurisdiction over passenger service, except to permit pooling, and such control as is provided over freight service is exercised in entire harmony with the Car Service Section of the American Railway Association. Federal regulation of rates has done away with rebates, prevented destructive rate wars, eliminated preferential state-made rates, and permitted a general level more than 50 per cent higher than the pre-war basis, in sharp contrast with prevailing price levels on most commodities. At the same time the railroads have been permitted a very large measure of freedom in reducing rates to meet new competitive conditions. They do not like federal rate regulation in all respects, but if they will refresh their recollection of the conditions which prevailed when no such regulation existed, I doubt whether they or even their security holders would wish it eliminated or even greatly curtailed. Recapture of excess earnings is a thorn in the flesh, although there has been little actual recapture so far; but the Commission is recommending the repeal of this feature of the law.

Turning to the new forms of transportation, it is contended by railroad protagonists that trucks and busses, water carriers, and airplanes are, in effect, subsidized by the federal and state governments. This contention is as vigorously disputed by the friends of these other carriers. My hope is that this question will be set at rest by a thorough and impartial investigation under authority of Congress. If direct or virtual public subsidies place competition on an unfair basis, the situation should be corrected. But first we must have accurate knowledge of the facts.

There is a form of public regulation which is very important and which has to do with safety and convenience in the use of the highways, and it concerns itself with the size of vehicles, their weight under lading, indemnity bonds, drivers' licenses, and other similar matters. The states have been active in such regulation, and their requirements affect both intrastate and interstate operations. They differ very widely. Obviously a greater degree of uniformity is desirable, and it may be that this is a field which should be occupied in whole or in part by federal authority. Certainly this possibility should be thoroughly explored.

The states have likewise been active in the regulation of bus, and to some extent truck, rates and service, and in requiring certificates of public convenience and necessity as a prerequisite to operation, with a view to avoiding unnecessary duplication of service and destructive competition. So far as interstate operations are concerned, this field is wholly unoccupied. My own belief is that a beginning should be made in interstate regulation as soon as possible. It should, no doubt, be a modest start. When once there has been actual experience with such regulation, the need for extending and expanding it can be better determined. In the

case of truck operation, the fact that so much of it is not conducted on a common-carrier basis presents unusual difficulties. A similar difficulty exists in the case of the port-to-port rates of water carriers, which are now largely unregulated, this difficulty being due to the operation of tramp steamships and other contract carriers. However, it seems not unlikely that the water carriers will themselves ask for public regulation of these rates, since they are suffering, just as the railroads did in the past, from rate wars and destructive competition.

Some change in the laws to permit freer use by railroads of motor trucks and busses as auxiliaries, and also to bring such operations within the scope of public regulation, may be desirable. This subject is now under consideration by the Commission in a special investigation, and I shall await the outcome of that inquiry before expressing definite views.

Summing up the situation, the new competition by which the railroads are confronted does very naturally create apprehension with respect to future railroad earnings. However, this competition affects only a lesser part of railroad traffic. Moreover, if the apprehension leads, as it now seems that it will, to a stimulation, first, of co-operation of railroads with each other; second, to a like stimulation of initiative and enterprise in readjusting service and rates to meet the new conditions; and, finally, to a thorough consideration of the need for extension or modification of the system of public regulation, my own belief is that the railroads will be able to work out their salvation and emerge from this plight as they have from others in the past.

OUR CHANGING TRANSPORTATION SYSTEM

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Most students who consider our changing transportation systems are impressed with the competitive aspects of modern transport which Mr. Eastman has so clearly set forth. Whatever modern facilities do or do not do, they certainly compete with one another. They compete directly, as when the railroads entering Chicago offer a suburban commutation service in competition with electric and bus lines connecting the city and its suburbs, or when the railways and the Great Lakes carriers dispute for the transportation of coal. Or they do it indirectly, as when pipe lines carrying fuel oil or natural gas seek to take the place of rail or water lines interested in the carriage of coal. The competition is perfectly apparent, although I imagine that the fact of competition still has a certain freshness to older men brought up on Hadley. "On either side of the Atlantic," Hadley sagely remarked in 1885, "most persons who have really looked into the subject have come to regard railroads as a sort of natural monopoly, not regulated by the ordinary laws of trade, and needing to be closely watched by public authority." I am not sure that Hadley was right when he wrote, at least in so far as the "natural monopoly" part of his dictum is concerned, or that his statement has ever been fully true since; but it is not important to discuss this. Let us agree that the striking characteristic of the present transportation situation is, that there is competition to a degree which suggests the philosophy of Darwin rather than that of Hadley. Or let us say that the different means of transportation which we possess may sometime lie down in peace together, but that we are not yet certain who will be inside.

I must make distinctions nevertheless in dealing with different forms of transportation. We hear much, for instance, of the development of aircraft, and the growth of the air industry has been dramatic enough. The contrast between the maximum speed of flight and the maximum speed of vehicles used in ordinary land and water transport, the visibility and audibility of the airplane, and above all, the unknown possibilities of the air machine impress the imagination. It is only fair to say, however, that the airplane and the airship are still infants, quite incapable of carrying any important part of the burden of modern traffic. Until they cease to report the volume of their freight in pounds, and their passengers in thousands, they can be excluded from discussions which treat of hundreds of millions of passengers and tons of freight.

It is also true that the amount of movement on inland waterways is, except for the Great Lakes, relatively small. The two developments of inland waterway transportation which have received most attention dur-

ing recent years are those of the Mississippi River and of the Panama Canal, if the latter can fairly be called "inland." The Panama Canal stood on the government books in 1930 at \$536,000,000; and Mr. Woodlock has estimated the government outlay upon the Mississippi and Ohio Rivers, excluding expenditures not for navigation, to have reached the sum of \$500,000,000 by the end of 1930. The physical features of both river and canal are impressive. Yet neither figures largely in the transportation work of the United States. During the calendar year 1930, less than three million tons of freight passed through the Panama Canal from United States Atlantic and Gulf ports to points on the west coast of the United States and Canada, and less than seven million tons in the reverse direction. This is to be compared with a total of two billion tons transported by Class I railroads during the same year. The figures for the Mississippi are even smaller. During 1930 the Inland Waterways Corporation, which is the principal, though not the only, carrier upon this stream, reported a revenue of \$5,852,655 and a total tonnage of 1,424,477. The Northwestern Pacific Railroad in California, which has an operated mileage of only 634 miles and is a minor subsidiary of the Southern Pacific, exceeded this total revenue in 1929 by \$334,108.

I suspect that the importance attached to the Mississippi River development, at least, is due to the effect that government success in this enterprise may have in determining future government policies, rather than to the commercial significance of the project itself. There is, of course, the plan for the development of the St. Lawrence. And if this can stand upon its own feet, there are plans for government ownership, or for regulation through partial government ownership which go back to the report of the Windom Committee of 1874, but which have been revived by the report last October of the committee on public utilities of the Progressive Conference. The report of this committee has been assailed as emanating from socialists who desire to socialize, entirely, American business. This may or may not be true, and it may or may not be important. It is to be presumed in any case that the experience of the government upon the Mississippi will figure in the debate when convinced advocates seek to extend the business activities of government, on the Mississippi or elsewhere. Meanwhile the opponents of government in business, and the railroads in particular, rally to the attack.

After all, the real meat in the coconut is supplied by transport over the public roads, not by transport over the water or through the air, or even by pipe line transportation. This transport is of respectable antiquity. There were steam automobiles in London, and plying between London and its suburbs, as early as 1830. Some of the most interesting technical developments in the steam engine, as, for instance, those related to the multitubular boiler, owe their perfection as much to experiments

with road engines as to experiments with engines running upon rails. Motor transport also reminds us that public regulation, however frequently beneficial, may also be destructive in its effect. According to early English law, motor vehicles upon the public roads were limited to a speed of four miles an hour; they were required to stop when a pedestrian signaled with his hand; they might not blow off steam; they must be manned by three men, and of these one must precede the vehicle carrying a red flag. Such regulations stifled motor transport in England for many years, and stand as an example of the possibilities of unwise control up to the present time. Mr. Eastman has not indicated the volume of transport now accomplished by motor vehicle and I am at a loss to calculate it for the reason that most motor vehicle owners make no report of freight or passengers carried, and our knowledge of the habits of automobiles and trucks comes from traffic counts taken by local bodies or from surveys conducted by the United States Bureau of Public Roads. The automobile industry itself estimates, however, that the total number of passengers carried by common carrier and sightseeing busses in 1930 was 1,778 millions, and the total passenger miles were 11,130 millions. The corresponding figures for the Class I railways of the United States were 704 millions and 27 billions. These statistics relate only to 48,250 busses and take no account of the private automobile. With respect to freight, Commissioner Brainerd has estimated the capacity of the roads of the country at 100 billion tons. The actual movement is, of course, only a fraction of this amount, but it is considerable, and my attention has been caught by one single set of figures which I will give you. According to the records of the National Live Stock Marketing Association, one-fifth of the livestock entering Kansas City in 1930 came in by truck, one-quarter of that entering Omaha, one-half of that entering Cincinnati, and two-thirds of that reaching Indianapolis. In these and in all other reported cases, the percentage entering by truck in 1930 exceeded the percentage of the year before. I may add to these facts recent testimony of the rate expert of the Oregon Public Service Commission to the effect that 51½ million tons of freight are being diverted annually from the Oregon railroads to motor trucks, and the estimate of railroad men in California that the tonnage lost by California railroads to truck operators for the year 1929 would have paid the railroads over 46 million dollars.

The rapidity with which the traffic of the motor vehicle has progressed clearly caught the railroads unawares, and revealed, it seems to me, some weaknesses in their organization. For one thing, the increasing percentage of funded debt to capital since the introduction of federal control has proved, I think, to be a mistake. In 1890, three years after the passage of the Interstate Commerce Act, the rate was 48.47 per cent. In 1900 it was still only 49.13. But between 1900 and 1910, coincident alike with the

advance in the stock market from 1903 to 1907 and with the passage of the Hepburn Act of 1906, the ratio of railroad debt to capital rose to a new level at which, in general, it has remained. The percentage of debt to capital was 54.9 in 1910. It was 57.1 per cent in 1924, and in 1929, after some decline, it was still 55.9 per cent, or 12 per cent over the figure of 1900. The necessity of paying interest upon the greater part of this funded indebtedness, and the periodical refunding operations which railroads are compelled to undertake, present difficulties during a transition period, to say nothing of a period of panic and depression.

I think, also, that the new conditions brought on by the motor car and truck have made evident a certain rigidity in the operating as well as in the financial structure of our railroad organizations. Railroad positions are governed by seniority. Advance is slow, even for men of exceptional ability, in the categories in which most workers are to be found. Special training, or the training of specially selected men, has met with obstacles which have caused the abandonment of promising beginnings. The result is that a railroad career has become less attractive to ambitious young men during the past generation than it need have been, and the railroad has lost the advantage of the services of a considerable and a capable group which it might have employed. After all, the railroad is not alone in having to meet periods of transition. Many industrial firms passed through a period at the close of the World War quite as difficult as that which now confronts the rail carrier. One need only refer to the experience of the munition manufacturers and to their success in developing lacquer, rayon, and the new product of cellophane to make good the revenues lost when the demand for explosives declined. In contrast to the flexibility of industry, the railroad has been slow to use new devices. Doubtless it has been persuaded at last, and is entering the field of motor transport with energy and success, but a more alert management would have pioneered where the railroad has only followed. I do not suppose that the statement is susceptible of proof, but I associate the present plight of the railroads in part with their failure to capture their fair share of the brains of the past three or four business generations. It is likely enough that railroad managements assented more readily to seniority rules because they counted on the protection inherent in a régime of limited monopoly; but if this is the case, the motor vehicle has stripped them of their shield.

It is hard to say how far railroad difficulties are, at present, the result of fundamental change in the character of our transportation system, because one of the railroad misfortunes is that the carriers have been caught in a business depression just at the time when they have been struggling with peculiar problems of their own. So far as the railroads are concerned, the dividing point between the period of relative prosperity

which followed the return of the carriers to private hands and the present crisis seems to be located in the month of October, 1929, when the monthly operating revenues of carriers in the United States rose to the unprecedented figure of 609 million dollars. From this high point, railroad earnings and business declined with dramatic suddenness. Operating revenues fell from 609 millions in October, 1929, to 483 millions in October, 1930, a reduction of 20 per cent; while the earnings of 457 millions which the rail carriers earned in July, 1930, had fallen to 377 millions in July of the following year. At the same time the Dow-Jones index of the price of railroad stocks fell from 178.53 on October 11, 1929, to less than 50 in October, 1931, and the price of railroad bonds declined. I do not know why the railroads should have escaped the effects of the general recession in business. It deserves to be noticed, however, that while the prices of railroad securities increased less rapidly than the prices of industrial securities during the period from 1920 to 1929, they fell *pari passu* with them in the decline. According to the *New York Times* index, the average price of twenty-five railroad stocks was, in 1920, 45 per cent of the average price of a like number of industrial stocks. In September, 1929, the quotations of the railroad stocks were 34 per cent of the industrial securities, while in August, 1931, the percentage was 31.

It is an interesting question how far such fluctuations in railroad earnings as have occurred during the past decade might have been compensated by the accumulation of reserves which could have been drawn upon to pay dividends during lean years. The Interstate Commerce Commission referred to this matter in its denial of the carriers' request last October for a 15 per cent advance in rates. According to the figures cited in the decision, the corporate surplus of carriers in the United States increased from \$3,142,416,871 in 1920 to \$5,529,010,053 in 1929, or a gain of \$2,386,593,182. Such an increment was between four and five times the annual increase in receipts which the carriers expected from the emergency advance in rates. It was obvious that the particular accumulation was of no service in the crisis, because it was neither liquid nor could securities be sold against it at a time when railroad credit was impaired. The Commission suggested, therefore, that in the future some portion of railroad surplus be held in liquid form. The difficulty with such a proposal is in finding some form of investment which will be exempt from the influences affecting the railroads themselves. Unless either the railroad or the bank with which the reserves are left finds some such outlet, there can be no true liquidity. This is also the problem which confronts the proponents of corporate reserves against unemployment. Reserves can easily be kept liquid by a single company. They cease to equalize and lose their liquidity when all industry employs them, and as they increase in magnitude they tend to pass from the first condition to the second. It should

not be said offhand, perhaps, that the railroads may not improve their credit by paying more attention to the liquidity of their reserves, but it is very probable that the policy will depend for its success upon the chance that only a portion of the business world adopts it.

The Interstate Commerce Commission thinks that the rapid decline in the prices of railroad securities was in part the railroad's own fault, being intensified by railroad attempts to make a case for an increase in railroad rates and for the extension of regulatory control to other means of transport. Most people would take the view that in its later stages, at least, the falling off in the prices of railroad securities reflected the unsympathetic attitude of the Interstate Commerce Commission, and the substantial losses of traffic to competing carriers during the past few years. Depression or no depression, the rail carriers have seen their short-haul coach business pass to the motor vehicle with alarming speed, while they are now engaged in a battle to retain their short distance freight traffic in which they are not yet sure of being successful.

What may be expected of government at a time when the character of the transportation system of a country is changing? Railroad men insist that the Interstate Commerce Commission has only to obey the simple mandate of the law, and adjust rates so that rail carriers will, under honest, efficient, and economical management and reasonable expenditures for maintenance of way, structures, and equipment, earn an aggregate annual net railway operating income equal, as nearly as may be, to a fair return upon the aggregate value of the property of such carrier. Of course, this has not been done. The rate of return has not, since 1920, equaled either the 5.5 per cent mentioned in the Transportation Act, nor the 5.75 per cent fixed by the Commission in 1922, on either an original cost or on a cost of reproduction valuation, and I think that the Interstate Commerce Commission decision last October in the 15 per cent advance rate case affords dramatic illustration of the fact that the Commission will not manipulate rates so as to bring about the result contemplated by the statute. It is true that the Commission alleged reasons for its refusal. It did not believe, for instance, that the proposed increase would bring the expected revenue. It thought that the standard embodied in the statute referred to normal times, and did not require the Commissions to readjust rates to meet business fluctuations. And it reasoned that rates must still be reasonable under the Act as well as remunerative to the carriers, and that where these standards clashed, the rule of reasonableness was to prevail over that of remuneration. Yet these explanations are not convincing. And the last mentioned in particular deserves a word of special comment. It is said that rates must be reasonable as well as remunerative. There is, however, no test of the reasonableness of an individual railroad rate, except that of comparison, or of correspondence

with value of the service rendered, or of attention to the profit which the rate may yield. And comparison fails when an entire schedule of rates is under consideration, while the reference to the value of the service principle contained in the Commission's decisions proposes a test of a highly uncertain character. To adjust individual rates according to the value of the service to the shipper ignores the fact that rates themselves determine, as well as are determined by, the demand for transportation. It is a practice necessarily embarrassed by the circumstance that the value of service to different persons is different and it implies that the carrier is a partner in the variable profits of business instead of a public servant serving for a relatively fixed return. These are familiar objections to the use of the idea of value of service as a measure of the reasonableness of particular rates, and it seems to me that they are pertinent objections when it is sought to use the prescription of reasonableness as a bar to the imposition of rates which do not on the whole yield to carriers more than a fair return. What can be said for the notion of value of service in railroad rate making is that where a total sum which a community is to pay for the carriage of its persons and its goods has been independently determined, then this sum may be distributed among consumers according to their demand for service; and this policy may even extend to the variation of the level of rates in different periods of time, so that a predetermined volume of revenue may be principally collected at those moments when business finds it most convenient to pay. I think that such a policy is logically defensible, but I think also that it faces grave practical obstacles and that the principle behind it is far from being generally understood.

Whatever our private opinions may be with respect to the theory of rate making which the Commission defends, and which is more or less forced upon it by the courts, we shall probably all agree that when the character of the transportation system of a country is changing it is wrong to maintain a given level of income on the old investment by varying rates, because no one can know how large a proportion of the capital invested in a particular type of machine has been made superfluous by new invention. If part of the investment has been superseded, it should be allowed to go. Fortunately, most of the railroad plant of the country would remain, were this principle to be applied. The Commission said in October:

The railroads now furnish the backbone and most of the other vital bones of the transportation system of the country, and we believe this will be the situation for a long time to come. We are not impressed with the thought that they are doomed, in anything like the near future, to go the way of the stage coach and canal.

On the other hand, when a country adds a motor investment of 12 billion dollars to a rail investment of 23 billion dollars, with no corre-

spending increase in traffic, many marginal units must be written off. It is unlikely, under such circumstances, that a government will exert its power to maintain earnings as though no impairment of values had occurred. Fair return becomes a relative thing, subject to conclusions with respect to obsolescence, and while the present losses of rail carriers may affect their future rate of return, the railroads must rely upon their own efforts here and now if their solvency is to be preserved.

If we agree upon the preceding statement, we shall probably also agree that it would be unfortunate if government, in addition to refusing positive help to the rail carriers in a period of transition, took or permitted any action which should favor either of the contending parties. Rail carriers, of course, complain that government does just this in two respects: (1) in that railroads are regulated, and other forms of carriage are less regulated; (2) in that the public subsidizes other forms of transport and does not subsidize the railroad.

These are highly contentious propositions, and it is difficult to speak usefully about them. With respect to the first, I take it that the criticism of the rail carriers does not relate to the motor bus, for most busses are common carriers subject to stringent state control, or they are vehicles of special types such as sightseeing busses, or put to special uses, as busses for the schools. We began bus service in California without regulation, but this was a period to which no man in his senses would desire to return. Nor does it relate to the common carrier by truck. It is true that interstate regulation is still to be added to the control exercised by the several states, but I doubt if the lack of it seriously affects the carriers by rail. On the other hand, I see, at present, no way to control the rates or to limit the competition offered by the contract truck carrier or by the industrial carrier, and I am confirmed in this view by the fact that the excellent report of the English Royal Commission on Transport comes to the same conclusion. The only practical method of equalizing the conditions of competition between rail and motor carriers of these types appears to be to loosen the control applied to rail carriers. This may be done (a) by permitting the quoting of rates on less than statutory notice; (b) by liberality in granting exemptions from Section 4; and (c) by the free issue of certificates of convenience and necessity to rail carriers who desire to carry freight over the public roads. These measures would probably not bring back all lost traffic to the railroads, but we are not interested in bringing this traffic back, but only in equalizing conditions of competition between different kinds of transport. Nor should it be forgotten that, when it comes to competition, the railroad has advantages of its own, including the ability to throw the burden of its fixed charges upon noncompetitive freight. It seems to be conceded, for instance, that the rates for the shorter hauls which the Interstate Com-

merce Commission has been prescribing in its mileage rate decisions during the past six years have not been high enough to cover full terminal expenses together with a proper allowance for the line haul. This means that the rail rates which compete with the motor truck are lower than they could be if the railroad could not call upon the noncompetitive traffic to help foot the bill. It may be that the railroad will be able to retain an adequate share of the freight traffic by virtue of these and other practices if regulation is somewhat liberalized, even though, in general, it is subject to relatively strict control.

Let us now turn to the question of subsidies. A carefully prepared address by an official of the Southern Pacific Company pointed out, three months ago, that the state of California had \$61,172,000 of highway bonds outstanding, on which interest and redemption charges were paid by the general taxpayer. Speaking again of the far west, the city of San Francisco operates a local railroad giving access to its waterfront to shippers who are willing to pay its charges. But the city also maintains a broad street along the waterfront known as the Embarcadero, which trucks may use free. For air transport, the federal government lights air routes and establishes radio beacons. It did, once, make grants to the railroads, but as to these grants two things may be said. One is, that the government obtained a *quid pro quo* for the railroad land grants. The other is that past railroad favors are impertinent to present railroad problems. What we seek is a condition of competition in which, today, the more efficient mode of transport shall prevail over the more expensive. Gifts to railroad companies in the past inured to the benefit of the owners of railroad property at the time the gifts were made. They do not weigh in the balance in deciding present policies, because present owners hold their property at present costs, and all questions of alternative utilization are decided as though no gifts ever had been made.

To sum up the carriers' complaints with respect to subsidies: They show conclusively that government favors the competitors of the railroads in various ways, but it is not yet clear whether the rail carriers' principal complaint, that of unequal taxation, can be maintained. On this last point the carriers' position is that the railroads, in addition to maintaining their roadbed and structures, pay in some manner, proportionately with all other real estate and personal property, taxes on this roadbed and these structures; while no taxes are paid on the roadways and highway structures used by the motor vehicle. The railroads maintain that the so-called gasoline tax is not a tax, but a convenient method of collecting a rental or charge for the use of public property. Motor vehicle owners reply that motor vehicles are paying enough to maintain the roads, and that in addition, if all their various contributions are taken into account, they pay a reasonable sum for the support of government.

In the present stage of our information, we probably cannot say how much the motor vehicles in the United States are paying. It may be possible, nevertheless, to outline a method, and for the purpose of illustration we may use convenient figures, without entirely conceding or assuming the correctness of the statistics which we employ. If we have a method, correct figures and results will come in time. Suppose, therefore, that we take \$761,000,000 as the annual cost of the road system of the United States for 1929 in which motor vehicles are interested. This is a figure supplied by the National Association of Motor Bus Operators, which includes one-third of the expenditures for local roads and all of the costs of interest, amortization, and maintenance of state roads for 1929. The registration and gasoline taxes for the year 1929 were \$779,000,000, or an excess of \$18,000,000. To this excess let us add \$150,000,000 of personal property and municipal taxes, making \$168,000,000 which motor vehicles contributed in 1929 for general governmental purposes. From what sum of property values was this sum derived? According to the reports of the National Automobile Association, the total value of the production of cars and trucks from 1923 to 1929 was \$20,000,000,000. If assessed at 60 per cent, this value would become \$12,000,000,000. If, further, we depreciate our capital sum on the assumption of an average life of seven years and an average age of three years for a motor vehicle, we have a total of, perhaps, \$7,000,000,000. As against this, the taxes of \$168,000,000 amount to approximately \$24 in the thousand. This rough calculation does not make it evident that motor vehicles are paying too little at the present time, and while the heavier trucks and busses may be causing uncompensated damage to the public roads, we have testimony of the chief of the United States Bureau of Public Roads that this is not, generally, the case. Mr. MacDonald's remarks may be summarized by saying that any surfaced road which he would recommend building will support a wheel load of 9,000 pounds; that only very heavy trucks exceed this, and that even such trucks could be brought within the limit of tolerance by forcing them to multiply their wheels.

A wise government, in a time of transition, will see (1) that the losses due to transition are minimized; (2) that the government itself interposes no obstacle to the choice of the most effective machinery, or to the partial or entire elimination of the unfit; and (3) that competition between different agencies of transport takes place upon the plane of service to the public. It seems to me that the transportation problems which face the country at the present time can be attacked in the light of these primary obligations. Such standards are even more important for the moment than rules for valuation, which plagued the courts during the period of rising prices. Fifty years from now the student will regard

the first half of the twentieth century as a time of absorbing interest, in which technical improvements of the first magnitude opened new possibilities for service to industry and transport, while at the same time they compelled certain readjustments. If we can really follow a line of conduct which we are all likely to approve in principle without controversy, it may be that the losses during this transition period will appear to have been less than those suffered in earlier, similar periods when business and industry were expanding less rapidly but when different classes of transportation agencies were less inclined to co-operate among themselves.

DISCUSSION

MARVIN L. FAIR.—In respect to the present serious plight of our railroads, Mr. Eastman has pointed out that competition and depressions are not new to these carriers and that this one differs only in its extent. However, I submit that never before have the railroads faced a set of competitive conditions analogous to those which they now face. Though the situation is reminiscent of the early period of railroad development which was characterized by water and highway competition, still we must remember that at that time the railroads represented the threat to existing transportation and because of their decided superiority over alternate facilities there was no public loss in their complete substitution for existing agencies. The present situation, in contrast, finds the steam railroads the basic and still the essentially superior national agency of transportation, facing, however, a group of new competitors, which under present inequality in competitive conditions, may deprive them of their rightful place.

There is even greater contrast between the present competitive situation and that which prevailed during the long period of complete railroad dominance. It was then a case of competition between units of like kinds—a competition that was limited or incomplete with much security in the monopoly at noncompetitive points. Furthermore, the competitors were all common carriers using a highway that was constructed and maintained at their own cost. Today the railroads face a very complete competition from a variety of competitors many of whom are unregulated contract carriers, which use public maintained highways and waterways.

The extent and nature of present-day competition, actual and potential, has been discussed by Professor Daggett. He has minimized the competition offered by the waterways. But I am sure that Professor Daggett will admit its importance to some of our southern railroads. I am more impressed than he with the traffic possibilities of the newly constructed and definitely projected 11,000 miles of interstate large-bore pipe lines for the transportation of gas and gasoline.

Professor Daggett has indicated that the most dangerous of the railway competitors is the highway motor vehicle which has already taken away a large part of the railroads' passenger traffic and much of its most valuable freight traffic. Its practicability as a carrier in both passenger and short-haul, less-than-carload traffic was freely predicted some years ago, but within the past five years it has made great inroads in not only lightweight carload freight but also in heavy unclassified freight, such as coal and building materials. Commissioner Eastman has well demonstrated the extent to which these inroads have affected earnings.

Now in reality we have two railroad problems facing us.

The first problem involves the consideration of those managerial and governmental policies which will help tide the railroads over the existing depression and which will eliminate those financial practices which made the railroads ill prepared for this depression.

The second problem involves the consideration of a program which will

cause each form of transportation to prevail in its rightful economic place in an efficiently co-ordinated transportation system. The proper solution of this problem is far more essential than the solution of the first. The railroads are rightly concerned over the doubtful opportunity of selling their services so as to preserve their rightful place in this co-ordinated system. In the solution of this problem the policies of both railroad management and regulatory bodies must take a new direction.

I heartily agree with Commissioner Eastman that the matter of regulatory policy is secondary to the matter of improved railroad operation. Of the various competitive wastes to which Commissioner Eastman referred, the duplication of facilities and the wasteful terminal operations constitute the major obstacle to successful competition with the motor carrier. The great advantage which the railroads have in the economy and speed of line-haul movements is often nullified by delays and high costs in terminal operations. This fact largely accounts for the ability of the motor trucks to give a faster service at lower costs between many cities which are within 250 miles of each other. This vulnerable aspect of railroad operation has been described in a considerable number of terminal investigations made since the World War. Even more eloquent evidence is to be found in the very recent success of the motor vehicle in intercity transportation. In this success, the convenience of direct service from shipper to consignee augments the advantages of speed and economy of the motor vehicle, all of which modern commercial practice demands in package freight service. There is no alternative left for the railroads; they must furnish the same complete and expedited service if they are to remain a major factor in carrying this growing small-shipment traffic. The recent inroads of motor vehicles in the movement of coal and building materials indicate that the railroads may be compelled to give a mine-to-consumer's door service, which would eliminate the local coal dealer's services.

The facilities, methods of operation, and rate structure of the American railroads were evolved to meet the growing traffic in long-haul movement of large shipments to and from factories and merchants who formerly ordered their goods on a seasonal basis. Therefore, railroad transportation meant great cars which moved in large tonnage trains with little concern for expedited handling within terminal areas. It meant also a rate structure based on the value of service with the consequent highly graduated distance scales for rates and one that was characterized by relatively high rates on high grade freight. To change such conditions to meet present commercial needs will require a major adjustment of railroad rates.

To meet this challenge the railroads must first adopt new facilities and methods in handling package freight; second, adopt a new basis of classifications and rates; and finally, co-operate in both the standardization of the new equipment and in terminal operations.

The exact type of equipment and methods of using it will vary with the type of traffic and conditions existing in various terminals and sections of the country. Commissioner Eastman has emphasized that within our larger terminal areas, where most of this package freight is handled, efficient operation of this co-ordinated service will necessitate abandonment of old down-

town tracks and freight houses with a motorized service from outlying freight stations and the use of standard containers. This would in many cases be improvident if such terminal facilities were not operated as a unit or jointly by several or all rail carriers entering a given terminal district. Just where this co-operation or unit operation should begin and where it should end will also vary with conditions existing in the respective terminals. In some of the largest cities it should include all terminal operations. Truly, the railroads face a severe penalty if they do not sacrifice competitive advantages in order to establish jointly controlled facilities.

Just why has railroad management so largely failed to adapt its operations and rate structure to the demands of modern commerce and to forestall competition of motor vehicles? It has been pointed out by Vice-President Turney of the St. Louis Southwestern that first the express companies, then the parcels post, and finally the freight forwarders and independent motor carriers were allowed by the rail carriers to obtain a foothold rather than adapt their operations to the new traffic in package freight.¹ Has the seniority rule militated against capable leadership as Professor Daggett infers? I am inclined to believe that vice-presidents and general managers of traffic and transportation departments are for the most part capable men who are expert in the technique of railroading in the old sense. The commendable progress during recent years in the details of car service is sufficient proof of that. Possibly the explanation of their unfruitful efforts lies, first, in the unwillingness of management as a whole to abandon old facilities which constitute heavy investments that have long represented distinct competitive advantages over rival railroads; second, in the legal barriers to practicable use of motor vehicles; and, third, in the fear of unfavorable rate regulation. All of these, I believe, have been important factors in discouraging proper initiative in a field of operation that is new to them.

There is a widespread conviction that the situation requires major changes in the character of public policy. Shall the trend be towards a greater competitive freedom for the railroads or shall it be towards a broadened scope of regulation which contemplates the equilization of competitive conditions. Some railroad spokesmen assert that it is either freedom or destruction of private ownership and operation. Professor Daggett expressed sympathy with the adherents of greater freedom. Commissioner Eastman, however, has convincingly demonstrated the illusions of security and prosperity that lay in this direction, and reminded us that effective regulation was sought in the beginning to remove the evils of competition as much as it was to curb monopoly.

The alternative is to remove unjust aids to the competitive agencies and to subject them to a degree of regulation that will remove any unfair advantages they now have. This is the course of action that the Interstate Commerce Commission advocates in its last annual report. Closely related to this is the alleged injustice of taxation policies to which Professor Daggett has referred. The data which he advances to show that the motor carriers do bear

¹ J. R. Turney, "The Motor Truck—A Threat and an Opportunity," *Railway Age*, Vol. 91, pp. 701-704.

their proper share is not convincing. In any event, our concern is not in regard to the tax burden of all motor vehicles but of those vehicles which operate for hire as competitors of the railroads. There is certainly a great need for thorough study into this matter.

The question of regulation of both motor busses and motor trucks has been undertaken by several states and has been considered by the Interstate Commerce Commission. Our objective in their regulation should not be to establish the same or even an equal degree of regulation over either the motor vehicles, or over the port-to-port water carriers, but to establish comparability of regulation. The great differences in the transportation agencies and the conditions under which they operate would require differentiation in the emphasis on safety, rates, accounting, etc. Professor Daggett despairs of effective regulation of the contract carriers. Despite the unfruitful efforts of our states and England in this matter, I am still hopeful that the legal barrier involved will give way to the right of the public to regulate transportation for hire over its own highways. Only last October 26, Judge Hutcheson of a Federal District Court in Texas upheld the recent Texas law which attempts to apply regulation to these carriers not as common carriers but as private carriers.²

Commissioner Eastman has pointed out that the policy of broadening the scope of regulation as a remedy does not preclude changes in the laws which are necessary to enable the railroads to employ more freely other transportation agencies as auxiliaries.

Our procedure in public policy should be based upon the following considerations. First, our chief concern should be the furthering of a properly co-ordinated transportation system in which neither competition nor consolidation would have significance per se.

Second, I believe that our watchword in regulation during this difficult program of adjustment should be flexibility.

Third, I further contend that the comprehensive nature of this program will require more initiative and sympathetic guidance on the part of governmental authorities than has been required at any previous time.³

Fourth, the need for facts regarding the many transportation agencies and the conflict of vested interests may be so great that there should be established an institute of transportation through which unbiased investigation will be furthered.

Finally, before further increasing the scope of the Interstate Commerce Commission's regulations, may we not question the adaptability of this body's organization and methods of procedure to a program which is primarily administrative.

While questioning the adaptability of the railroad structure to meet present-day demands, may we not question the adaptability of a quasi-judicial commission, effective and proper as it has been in attaining our early objectives,

² *Stevenson v. Binford et al.*, U. S. Dist. Ct. No. E. 479.

³ Professor W. M. Duffus, in a discussion on commercial motor transportation before this Association in December, 1929, stated that "the complexity of transportation problems [makes] imperative a greater reliance for their solution in governmental initiative and less upon accidental agreements among conflicting interests." See *Am. Ec. Rev.*, Vol. XIX, *Sup. 1*, pp. 246-251.

of regulation? We should not abolish the Interstate Commerce Commission but possibly all the purely administrative work of that body could be better handled by a superadministrative division integrating the work of all bureaus and headed by an experienced administrator and leader in transportation matters, under salary which would not have a statutory limit. With district representatives to maintain constant contacts with this machinery, we might expect to obtain a more familiar, flexible, and constructive approach to regulation of privately owned and operated carriers.

HOWARD C. KIDD.—One of the most significant statements made by Commissioner Eastman is his remark that new conditions in transportation call for a revision of the railroad rate structure. Railroad executives tell us that the class rates that become effective December 3 were obsolete long before the new tariffs were actually published. Whether this observation is true or not, there are many questions suggested by the Commissioner's allusion to rates. Is mileage the correct measure of what the traffic will bear in view of the complex forces of carrier and market competition? Is it not possible to give traffic departments greater latitude in making quick adjustments in rates to meet outside competition, without at the same time disrupting a rate structure, or precipitating an old-fashioned rate war among the rail carriers? Does not the long- and short-haul clause, devised at a time when railroads were regarded as monopolies, create unfair competition which its framers never contemplated? Could not a bold experiment be made with L.C.L. (less than carload) tariffs, making them so simple in structure that a layman could understand them, and designed on a zoning principle not unlike that used by the parcel post? Would it not be wise to permit the railroads to quote bulk rates on train load instead of carload lots when it is necessary to do so, in order to meet water and pipe line competition?

However these questions are answered, it is necessary to recognize that the railroads need to be put in the best bargaining position possible, if they are to hold their own under the conditions they are compelled to face. Even if they were operating under an ideal rate structure, the railroads could not afford to ignore the policies of intelligent co-operation which Commissioner Eastman has outlined. Commissioner Eastman states that with regard to subsidies, more facts are necessary before drawing conclusions. In certain fields this may be true, but with reference to water transportation at least we already have studies of recognized merit. I refer to the researches of Dr. Parmelee of the Bureau of Railway Economics, and Dr. Moulton of the Brookings Institution. In fact, one needs to go no further than the reports of the government barge line to see the generous public aid to one segment of water transportation.

Regarding motor vehicle regulation and subsidies, the Commission has been accumulating data for some time. Within the past few years, there have been two extensive hearings on this subject; and in the 15 per cent case, the Commission said: "The facts in regard to motor competition we helped to develop some years ago. . . . We hope in the near future to supplement these facts and bring them up to date, together with specific recommendations for legislation."

After reading this statement, the public was led to believe that the ground

was cleared for proposals that would at least express the mind of the Commission on a most controversial problem, and therefore the reference to the need for an additional congressional investigation is both surprising and disappointing.

If a congressional investigation is necessary, let us have it by all means as quickly as possible so that each form of transportation will know where and how it stands. But the very fact that the Commission which is close to the transportation picture is in need of more information on a subject which has been in the foreground of discussion for a decade, suggests what must be the bewilderment of the public, including transportation economists, who view the scene at a greater distance. We are working pretty much in the dark; and in order to turn on the light and keep it turned on we need a permanent scientific body, independently financed, divorced from politics or carrier control, to study and give us the facts on transportation questions at issue. I am glad to report that Professor L. C. Sorrell of the University of Chicago, sponsored by the Associated Traffic Clubs of America, is now working on the project of forming a transportation institute which will meet our imperative need for continuous scholarly research.

Professor Daggett thinks that intercoastal commerce that passes through the Panama Canal is relatively unimportant. But I suggest that if ton mileage could be used as a basis of comparison, the results would be more impressive. Moreover, it is the influence of the Canal route upon market competition and the rate structure of the western lines that is equally as important as freight statistics in measuring the economic influence of coast-to-coast trade. President Shoup estimates that the transcontinental railroads lost \$49,000,000 in revenue in 1929 as a result of the Canal route, and the Interstate Commerce Commission in the 15 per cent case goes so far as to say that "waterway competition is now a controlling factor on transcontinental traffic, not only between the coasts but also reaching far inland."

Reference has been made by Commissioner Eastman to the proposed regulation of water transportation. But the legislation that was recently introduced in Congress provides that jurisdiction be given to the Shipping Board rather than to the Interstate Commerce Commission. While there is nothing to be said against the Shipping Board as a responsible agent of Congress, the logical regulatory body is the Interstate Commerce Commission. The Commission already controls the rates of a large volume of water shipments that move under common arrangements with the railroads; the problems of rail and water commerce are interrelated; and the Commission is intrusted by the Transportation Act with the duty of preserving in full vigor both rail and water transportation. While much has been said about co-ordination of transportation, more needs to be said regarding the co-ordination of regulation.

SHOREY PETERSON.—Many details in the principal papers deserve comment and elaboration, but I shall limit myself to a few remarks on the central theme of competition in transportation and its control.

Competition is an outstanding and persistent fact, despite the preference of many persons to speak of the relation of agencies as essentially supplementary, and the inclination of others to condemn all departures from the prin-

ciple of natural monopoly. It is useful to be reminded, as Commissioner Eastman has done, that competition has always characterized the railroads, and that it underlay the necessity of regulation. Because uncontrolled competition was ruinous to railroads, it does not follow that other agencies respond similarly; some are quite different. But it does follow that in a competition of agencies which include the railroads, governmental supervision of that competition is required.

There is a growing public interference in these newer relations of transport agencies, and I believe the consequences will be substantial. A member of the Interstate Commerce Commission declared recently that "ruthless economic laws" will determine which agency shall prevail "no matter what artificial impediments may be interposed to interfere with natural progress." This seems a questionable half-truth. With public subsidies possessing far-reaching possibilities, and with certain states restricting the operation of contract as well as common carriers on the highway, and increasing special taxes until a truck or bus may pay \$1,000 annually, the scope of government influence is considerable. Certainly emphasis should chiefly be placed on the high responsibility assumed by those who manipulate these instruments of control.

Danger exists that the business depression will affect permanent policy unduly. The wastes of competition are magnified when transport capacity is obviously excessive; but improved business should largely remove the slack. It is easy now to forget that the presence of alternative agencies, of unlike character, means a richer, more varied service than one agency can provide. Moreover, while at one stage of transport development competition may produce wasteful utilization of existing equipment and methods, our experience, even with railroads, suggests that competition may offer a stimulus to new levels of performance that regulation is not likely to supply. No comparison is intended of gains and losses which are essentially incommensurable; but the remark seems pertinent that the present plight of the railroads should not be allowed to obscure the contribution of rival agencies.

But competition, to be economic, must be equitable. Motor transportation possesses strategic advantages which do not spring from real superiority, but which, it seems, must largely escape control. Against these may be set the inherent advantage of the railroad of being able to subsidize competitive by means of noncompetitive services. But competitive advantage conferred through public subsidy need not be continued. Professor Daggett does well to stress how seriously the railroads, and some economists, are in error in assuming that motor carriers use highways free of cost. I suspect that certain elements of subsidy remain to be eliminated; but whether a congressional investigation will greatly clarify a matter where facts are less elusive than the manner of interpreting them, is open to legitimate doubt, though the publicity should be useful. The waterway interests invoke an imposing array of imponderable benefits to buttress their claim to subsidy, and characterize all opposing argument as railroad propaganda; but it deserves to be stated again that, as a matter of elementary economics, the railroads are right, and that, incidentally, their indirect social contributions are by no means inferior.

Competition, however, even when entirely fair, is a luxury that cannot

always be afforded. Situations undoubtedly exist, apart from the present depression, where traffic will support only one carrier, and competition of rivals cannot be depended on to preserve the better public servant. The railroad may be indispensable in performing some functions and inferior in others; but since a railroad is a peculiar unitary sort of thing that cannot readily scale down its facilities and live within the revenue of its indispensable services, public interest may require exclusion of the rival carrier. In regulating motor carriers, some states appear to have applied this principle, and more may need to; but the operation of rival agencies seems at times to be restricted for less compelling reasons.

Quite apart from the present emergency, it is desirable that artificial competitive advantage be removed. But it seems that any further restriction on competitors specifically undertaken to protect the railroads should not be imposed until the possibilities of strengthening the railroads have been fully exploited, through their own efforts and, where necessary, through regulation. Among the means suggested, it seems that the civil strife of rail carriers may well be abated, and new arrangements inaugurated, in the conduct of passenger and L.C.L. services subject to outside competition. British experience supports the view that store-door delivery is capable of striking with great directness at a leading advantage of truck transport; but our railroads, as the California Commission said of a large carrier in a recent case, have been "incredibly dilatory." It appears, too, that steps should be taken to relieve the railroads more completely of the cost of continuing services whose traffic is largely gone and which inevitably incur losses. But whatever the possibilities of such methods, it does not seem desirable to restrict rival agencies unless the railroads have achieved their utmost.

D. PHILIP LOCKLIN.—Commissioner Eastman and Professor Daggett have both made it clear that, aside from the problems caused by the depression, the transportation problem today is largely the problem of the relation between different forms and agencies of transportation. In so far as changes in legislation and in regulatory policy are concerned, four distinct methods of meeting the situation have been suggested in recent years.

First, we may follow the policy of protecting the railroads from the competition of the newer agencies of transportation. The refusal to grant certificates of convenience and necessity to motor carriers when they would compete with railroads is the most common manifestation of this policy. There are two difficulties with this policy however. In the first place, it can be only partially successful in protecting the railroad, because the private automobile and private truck, and perhaps the contract carrier, cannot be regulated in this way. After all, the railway is competing with the highway and not merely with the carriers for hire that operate over it. The second difficulty with this policy is that in so far as it is successful it denies the public the cheaper, or better, or different service that the trucks and busses may give. There are circumstances in which it is justifiable and desirable to protect railroads from bus and truck competition. But power to deny certificates of convenience and necessity to bus and truck operators on account of competition with railroads is a power which should be cautiously and sparingly exercised.

A second policy that might be adopted is to permit the railroads to acquire a monopoly of all kinds of transportation, or of such forms as they desire to control. It has been argued that this policy would enable the transportation companies to use the most economical form of transportation in a given situation. There are some regulatory practices now followed which may lead gradually to such a monopoly. Such is the practice of giving railroad companies, or their subsidiaries, a preference in the granting of certificates to operate trucks and busses on the highways, and the practice of protecting such lines from the competition of independent operators. The suggested modification of the antitrust laws to permit railroad control of competing agencies of transportation, and the repeal of the provisions of the Panama Canal Act which keep railroads from controlling competing boat lines, would represent further steps in the same direction. Two dangers lurk in the monopoly policy. It would often deprive the public of the benefit which might be derived from a cheaper or more economical method of transportation, and it is questionable whether society has brought regulated monopolies under sufficient control to surrender completely the protection which competing agencies of transportation may at times afford.

A third method suggested for dealing with the new situation is to abandon regulation, on the theory that railways are no longer monopolies and that competition will be a sufficient regulator. I am glad that Commissioner Eastman has devoted so large a portion of his paper to the experience with unregulated competition between railroads. If unrestricted competition between railroads resulted in all sorts of unjust discrimination, and in destructive competition, there is no reason to think that unregulated competition of railroads with other agencies of transportation would have different results. And since the ruinous character of competition between railroads resulted in combinations and attempted monopoly, it is probable that a similar result would follow competition of railroads with other transportation agencies.

The fourth method of dealing with the new competitive situation is to equalize the conditions of competition between the various forms of transportation in order that each may more readily find its proper place in a co-ordinated transportation system. This policy seems to involve a number of things. It implies that one agency of transportation shall not be subsidized to the disadvantage of another. It is commonly alleged, as both Professor Daggett and Commissioner Eastman point out, that motor transportation is subsidized. Motor trucks, whether private trucks, contract-carrier trucks, or common-carrier trucks, should be taxed sufficiently to contribute their share of highway maintenance and capital charges. In addition, carriers for hire may properly be taxed as any business is taxed. But equalization of advantage should not mean, as it seems to mean to some persons, that the taxing power is to be used for the purpose of depriving one agency of transportation of such inherent advantages as it may possess.

Equalizing the conditions of competition may, as Professor Daggett suggests, involve the modification of certain restrictions now imposed upon rail carriers. It is quite probable, for instance, that a liberal construction of the undue preference and prejudice provisions of the Interstate Commerce Act

(Section 3) and of the long- and short-haul provisions of Section 4, and of the aggregate-of-intermediate provisions of the same section, would be desirable in order to enable railways more easily to adjust their rates to the new conditions confronting them. Equalizing conditions of competition also implies, or should imply, that motor carriers should be required, in so far as possible, to publish their charges and to adhere to those charges, and that they should be prohibited from engaging in discriminatory practices.

There are serious legal and practical difficulties in the way of effective regulation of motor transportation arising from the existence of the contract carrier. I take it that Professor Daggett considers these difficulties as insurmountable. I do not say he is wrong, but I doubt whether sufficient effort has been directed to the task of overcoming the practical difficulties. And to those who believe that the regulation of contract carriers is not legally possible, let me suggest a consideration of the new approach to the problem presented by the Association of Railway Executives in a brief before the Interstate Commerce Commission in the recent investigation of motor transportation co-ordination, where it is argued very effectively that the contract carrier can be regulated. I am not sure but that the carriers could make out an even stronger case than they have in that brief.

MINUTES OF THE BUSINESS MEETINGS OF THE
AMERICAN ECONOMIC ASSOCIATION, HELD IN
WASHINGTON, D.C., DECEMBER 28-30, 1931

The first business meeting of the American Economic Association was held at 9:00 A.M., December 29, 1931, in Hotel Washington, Washington, D.C., with President Bogart presiding.

The minutes of the meeting of December 31, 1930, were approved as printed in the *Proceedings of the Forty-third Annual Meeting*, pp. 268-270.

The following reports were read and approved:

- (1) The Secretary, Mr. Deibler. (See p. 279.)
- (2) The Treasurer, Mr. Deibler. (See p. 283.)
- (3) The Auditor, Mr. Deibler for Mr. Eric Kohler, of E. L. Kohler and Company. (See p. 284.)
- (4) The Managing Editor, Mr. Dewey. (See p. 289.)
- (5) The Finance Committee, Mr. Deibler for Mr. C. H. Crennan. (See p. 291.)
- (6) The Joint Census Advisory Committee, Mr. W. F. Willcox. (See p. 293.)
- (7) The Representative to The American Council of Learned Societies, Mr. W. F. Willcox. (See p. 292.)
- (8) The Report of the *Encyclopedia of the Social Sciences*, Mr. F. Fetter for Mr. E. R. A. Seligman. (See p. 294.)

Professor Joseph Willits, reporting for the Committee on Honorary Members, recommended the following European scholars for election to honorary membership in the American Economic Association:

Arthur Lyon Bowley, University of London
John Maynard Keynes, Cambridge University
Walter Layton, Editor, *The Economist*, London
Arthur Augustus Caspar Spiethoff, University of Bonn, Germany

The report of the Committee was approved, and the persons nominated were elected to honorary membership in the Association.

President Bogart appointed Dean William F. Notz of Georgetown University, Professors E. E. Agger of Rutgers University, and Ward L. Bishop of Lehigh University, a Committee on Resolutions.

Adjourned.

The second business meeting of the American Economic Association was held at Hotel Washington, December 30, 1931, at 9:00 A.M., with President Bogart presiding.

The minutes of the meeting of December 29, 1931, were read and approved.

Professor L. C. Marshall submitted the following report as representative to the Business Research Council:

Of necessity, the current year has been primarily devoted to organizing the Council. On November 23, 1931, the following officers were elected:

Henry S. Dennison, President
C. D. Ruggles, Vice-President
W. J. Donald, Secretary-Treasurer
Kenneth Andersen, Assistant Secretary

A report on collegiate business research for 1931 has almost been completed, and is to be published in the near future.

On motion, the report was accepted and ordered to be made part of the records of the Association.

Mr. Hammond made a report of progress for the Committee on Permanent Headquarters and the Selection of a Secretary-Editor. On motion, it was voted that a committee of three be appointed to continue the consideration of this matter and to report at a subsequent meeting.

The question of determining the place of the next meeting was referred to the Executive Committee with power.

Dean Notz presented the following report for the Committee on Resolutions:

WHEREAS, The successful conduct of an elaborate series of meetings such as those planned annually by our own and by related associations requires an enormous amount of preliminary preparation and labor; and

WHEREAS, These labors have devolved largely upon Dean W. M. W. Splawn, of American University, and upon Dr. Thomas Rhodes, Statistician of the Federal Reserve Board; therefore, be it

Resolved, That the Secretary tender to these gentlemen, and to those who may have been associated with them, the warm appreciation and thanks of the officers and members of the American Economic Association for their helpful service; and be it further

Resolved, That, in like manner, an expression of the gratitude of the Association be conveyed to our President, to the members of the Program Committee, and to those of the Publicity Committee, for their contributions to the success of this year's program; and be it further

Resolved, That thanks be similarly extended to the management of the Hotel Washington for its friendly co-operation in arranging the necessary physical facilities for the meeting, to the local press for the generous publicity accorded to the discussions, and to the Macmillan Company for its courtesy in making so freely available copies of the *New York Herald-Tribune*.

The resolutions were adopted and the Secretary instructed to send copies in accordance with the instructions contained therein.

Professor T. S. Adams reported for the Nominating Committee the following list of nominations:

For President: G. E. Barnett, Johns Hopkins University.

For Vice-Presidents: Ralph E. Heilman, Northwestern University; B. M. Anderson, Chase National Bank.

For Secretary-Treasurer: F. S. Deibler, Northwestern University.

For Members of the Executive Committee: John Ise, University of Kansas; R. H. Tucker, Washington and Lee University.

For Members of the Editorial Board: F. A. Bradford, Lehigh University; P. T. Homan, Cornell University.

For Member of the Program Committee: R. G. Tugwell, Columbia University.

For Member Social Science Research Council: Max Handman.

There being no additional nominations, the Secretary was instructed to cast a ballot, and the nominees were declared duly elected.

Adjourned.

**REPORT OF THE SECRETARY OF THE AMERICAN
ECONOMIC ASSOCIATION FOR THE YEAR
ENDING DECEMBER 12, 1931**

In order to record all of the activities of the Association for the year just closed, I am including the minutes of all meetings of the Executive Committee held within the year.

(1) Minutes of the first meeting of the 1931 Executive Committee:

The first meeting of the Executive Committee of the American Economic Association for the year 1931 was held in the Harvard Club, New York City, March 28, 1931, at 10 A.M. There were present: President Bogart, presiding, and Messrs. Day, Deibler, Hammond, Mitchell, and Willits.

Voted: To appoint George B. Roberts, Jr., as a member of the Finance Committee.

Voted: That the resolution in regard to the dismissal of 179 members from the faculty of four state institutions in Mississippi be laid on the table.

Voted: That the Executive Committee of the American Economic Association express its confidence in the past history of the American Association of University Professors and its cordial endorsement of the work that has been done by this organization in behalf of college and university teachers throughout the country, and furthermore it expresses its willingness to participate in a conference on academic freedom and academic tenure by sending a representative if the Council of the American Association of University Professors deems it advisable to hold such a conference.

Voted: In connection with the report of the special committee on permanent headquarters that the President be authorized to appoint two committees, one on ways and means, and one on personnel. The membership of these two committees is as follows:

WAYS AND MEANS COMMITTEE:

(not yet appointed)

COMMITTEE ON PERSONNEL:

PROFESSOR M. B. HAMMOND
PROFESSOR R. B. WESTERFIELD
PROFESSOR T. W. PAGE

Voted: That the President be authorized to appoint a committee to develop an appropriate program for a special meeting of the Association to be held in connection with the Chicago World's Fair in 1933. The members of this committee are:

DR. H. G. MOULTON
PROFESSOR H. A. MILLIS
PROFESSOR F. S. DEIBLER
PROFESSOR C. M. THOMPSON
PROFESSOR EDWIN F. GAY

Voted: To appoint Professor Jacob Viner of the University of Chicago as a member of the Executive Committee, to fill the unexpired term of Professor E. L. Bogart.

Voted: To ratify the choice of Washington as the place of holding the next annual meeting of the Association, which will be held Monday, December 28, to Wednesday, December 30, 1931.

Voted: That the President and Secretary be authorized to appoint a committee on local arrangements.

Voted: To publish the *Handbook* in reduced form, leaving out the geographical classification of the membership.

Adjourned.

(2) Minutes of the second meeting of the 1931 Executive Committee:

The second meeting of the Executive Committee of the American Economic Association for the year 1931 was held in Hotel Washington, Washington, D.C., December 28, 1931, at 5 P.M. There were present: President Bogart, presiding, Messrs. Daggett, Deibler, Dewey, Ely, Gay, Jones, Mitchell, and Willits.

The Committee on the World's Fair meeting in 1933 reported a resolution submitted from the Social Science Research Council, which reads as follows:

Resolved, That the American Economic Association approve the plan proposed by the Social Science Research Council for holding a World Congress of social sciences at the Century of Progress in Chicago in June, 1933, and that in the event the plan matures, this association hold a special meeting as a part of the proposed World Congress.

Voted: To approve this resolution and continue the Committee.

Mr. R. A. Flanders, representing the Society of Mechanical Engineers, presented a request to the effect that since the questions that are now coming before his association are more and more economic in nature, the mechanical engineers would like the advice and counsel of economists, and raised the question of some plan of co-operation between the mechanical engineers and the economists.

Voted: To authorize the President to inform Mr. Flanders that the American Economic Association would be glad to confer with the Society of Mechanical Engineers on the possibility of a joint program and to give such advice as would be consistent with the general policy of our Association.

Since there has come to the attention of the Association the fact that the *Handbook* has been used for circularizing the membership for expressions of opinion on controversial issues, and since in some instances the inquiry seemed to imply the sanction of the inquiry by the American Economic Association, the following action was taken:

Voted: To instruct the Secretary, when his attention has been called to the use of the *Handbook* for questionnaire purposes, to communicate with the person or persons conducting the investigation, and to suggest to them that they should exercise due care in avoiding the impression that the American Economic Association had given its sanction to, or was in any way connected with, the investigation.

A committee, consisting of President Bogart, Messrs. Handman, Millis, Deibler, representing the American Economic Association, and Dr. Meredith B. Givens, representing the Social Science Research Council, presented a resolution pertaining to the creation of a Committee on Research. (See p. 295 for a report of this Committee.)

Voted: That the Association establish a Committee on Research, for the purpose of making, in co-operation with the Social Science Research Council, further investigations and report at the next meeting as to the ways and means by which the Association can best promote research in the field of economics.

Voted: To appropriate from the funds of the Association a sum not to exceed \$250 to defray the expenses of this Committee.

Voted: To authorize the President to appoint a representative on the Joint Census Advisory Committee.

Voted: To reappoint the following persons to constitute the Finance Committee for the year 1932:

C. H. CRENNAN, *Chairman*
F. S. DEIBLER
GEORGE B. ROBERTS, JR.

Voted: To reappoint Mr. John E. Walker as Counsel for the Association for the year 1932.

Voted: To appoint Mr. David Friday as representative to the National Bureau of Economic Research for the year 1932.

Voted: That it is the sense of the Executive Committee that for the present not more than six round table sessions be provided at any annual meeting, and that the program of these sessions must be approved by the President for the material to appear in the annual proceedings of the Association.

Voted: That a small committee be appointed to act jointly with appointees of the American Statistical Association and the American Association of University Instructors in Accounting for the purpose of urging the Treasury Department to publish data on incomes.

Adjourned.

During the year the office of the Secretary has carried on the ordinary activities of the Association.

The *Proceedings* of the annual meeting of 1930 were edited and published as a supplement to the March, 1931, issue of the *Review*. The *Handbook* containing the names and addresses of the membership was published as a supplement to the June issue of the *Review*.

During the year, President Bogart made the following appointments:

Auditors:

E. L. KOHLER AND COMPANY

Nominating Committee:

T. S. ADAMS, Chairman

A. BERGLUND

H. G. BROWN

H. E. HOAGLAND

A. P. USHER

C. W. WRIGHT

Committee on Local Arrangements: W. M. W. Splawn, Chairman.

Upon request, the following persons were appointed to represent the Association on special occasions:

At inauguration of the President of the University of North Carolina: Calvin B. Hoover.

Representatives to the American Academy of Political and Social Science: Professor Don C. Barrett and Professor Susan M. Kingsbury.

In accordance with a resolution of the Executive Committee (Vol. XX, Sup. 1, p. 184), the President and Secretary have approved the use of the addressograph list of the Association by: Princeton University Press, to announce F. D. Graham's *Exchange Prices and Production in Hyper-Inflation*, and Governmental Control of Crude Rubber; New York State College of Agriculture, to announce the publication of the proceedings of the first and second International Conferences of Agricultural Economists; Legal Research Committee of the Commonwealth Fund, to announce a volume by Professor I. L. Sharfman; University of Pennsylvania, to announce several of their publications; and the Academy of Political Science, to announce the publication of *The Young Plan in Operation*.

The Association has continued its co-operation with the Pollak Foundation and the Adelphi Company, and circulars announcing reduced rates on the publications of these two concerns have been sent to the membership of the Association. This arrangement has been especially beneficial during the current year, as reports received to date indicate that a very large number of members have availed themselves of the special rates on the publications.

The following table shows the present status of the membership and the changes that have occurred during the year ending December 12, 1931, the date of closing the books of the Association:

| | | |
|--|-------|-------|
| Total members and subscribers in December, 1930..... | | 3,853 |
| Annual members in December, 1930..... | 2,704 | |
| Members removed: | | |
| Resigned | 94 | |
| Lack of address..... | 33 | |
| Non-payment of dues..... | 151 | |
| Died | 18 | 296 |
| | | <hr/> |
| Members added..... | | 2,408 |
| | | 218 |
| | | <hr/> |
| Total annual members in December, 1931..... | | 2,626 |

| | | |
|--|-------|-------|
| Life members in December, 1930..... | 76 | |
| Added | 1 | |
| | <hr/> | |
| | 77 | |
| Removed | 13 | |
| | <hr/> | |
| Total life members in December, 1931..... | | 64 |
| Honorary members in December, 1930..... | 17 | |
| Removed | 2 | |
| | <hr/> | |
| Total honorary members in December, 1931..... | | 15 |
| | | <hr/> |
| Total members in December, 1931..... | | 2,705 |
| Subscribers in December, 1930..... | 1,056 | |
| Removed | 179 | |
| | <hr/> | |
| | 877 | |
| Added | 199 | |
| | <hr/> | |
| Total subscribers in December, 1931..... | | 1,076 |
| | | <hr/> |
| Total members and subscribers, December, 1931..... | | 3,781 |
| | | <hr/> |
| Net loss..... | | 72 |
| | | <hr/> |

There was a net loss for the year of 72. This is the first year since 1915 that there has been a decline in membership.

The decline is accounted for by the fact that we have had fewer new members and subscribers during the year than during 1930. In 1930 we received 349 new members and 222 new subscribers, or a total of 571. During the current year we have received 218 new members and 199 new subscribers, or a total of 417. The depression has clearly prevented many persons from becoming members at this time. The decline would have been larger, except for the co-operation which the Secretary has received from members in nominating persons for membership. The Secretary takes this opportunity to express his appreciation of this co-operation, and hopes that more members will come to the aid of the Association during the coming year by sending nominations for membership to this office.

We regretfully report that during the year the deaths of the following members have occurred, and that we have had to remove their names from the active membership list:

IRVING ALLEN
EDWARD WEBSTER BEMIS
L. BRENTANO (Honorary Member)
L. BUCHER (Honorary Member)
HORACE F. CLARK
W. L. CLAUSE
WHITNEY COOMBS
GUY W. CURRIER
GEORGE W. ELLIS
RALPH ELLIS
CHARLES A. FASANO

CHARLES THEODORE GREVE
JOHN J. MACFARLANE
C. H. MARKHAM
BESSIE IRVING MILLER
WALTER S. MITCHELL
DWIGHT W. MORROW (Life Member)
JOHN P. MUNN
JAMES F. WALSH
MURRAY SHIPLEY WILDMAN
WILLIAM COPLEY WINSLOW (Life Member)

Respectfully submitted,

F. S. DEIBLER, *Secretary*

REPORT OF THE TREASURER OF THE AMERICAN
ECONOMIC ASSOCIATION FOR THE YEAR
ENDING DECEMBER 12, 1931

The members are referred to the report of the Auditor for a statement of the financial condition of the Association at the date of the audit. The current assets and current liabilities are shown in Exhibit I. The income and expenditures for the year appear in Exhibit II. The total assets of the Association now amount to \$46,126.21. This figure carries the investments at cost, which is \$6,827.04 above their present market value. It does not include the stock of unsold copies of the past publications of the Association, which have been charged as an expenditure against past income.

The total receipts, including dues, interest, advertising, and other publication income, and miscellaneous items, amounted to \$22,377.11, or \$582.96 in excess of the receipts for the year 1930. The income from dues was lower by \$198.20, whereas the publication income was \$732.24 in excess of similar receipts of last year.

Loss on securities sold during the year has been charged against current income, so that the net income of \$1,614.62 is a net addition to surplus.

The administrative and operating expenses were slightly less (\$63.42) than last year. The publication costs were \$1,598.97 greater than a year ago. This difference is due mainly to the following three items: \$336.16 increase in printing the *Review*, \$565.27 in printing the *Proceedings*, and \$589.54 in the publication of the *Handbook*, which did not appear last year. These three items account for \$1,490.92 of the increase noted. The *Proceedings* for the current year contained 308 pages as against 218 pages the previous year. There were 4400 copies per issue of the *Review* published, or 100 more than in 1930. The volume also contains 27 more pages than the previous volume.

The investments of the Association are given most careful scrutiny, and while their present market value is below their cost, they are, in the opinion of your Finance Committee, invested in securities of high grade concerns.

Unless there should be unforeseen declines in receipts, the Association can continue to carry on its present activities and keep within its present income.

Respectfully submitted,

F. S. DEIBLER, *Treasurer*

REPORT OF THE AUDITOR

December 19, 1931

*Executive Committee,
American Economic Association, Inc.,
Evanston, Illinois.*

DEAR SIRs:

As a result of our audit of the books and records of the American Economic Association, Inc., for the year from December 15, 1930, to December 12, 1931, we present the following exhibits together with our report thereon:

| <i>Exhibit</i> | <i>Number</i> |
|---|---------------|
| Balance sheet—December 12, 1931..... | I |
| Statement of income and expense—Year ending December 12, 1931 | II |

Results from Operations

The net income of \$1,614.62 for the year ending December 12, 1931, was \$1,274.44 less than for the preceding year, as shown by the following comparison of the operating results for the two periods:

| <i>Particulars</i> | Year ending December 15, 1930 | December 12, 1931 | Increase or decrease |
|--|-------------------------------------|----------------------|----------------------------|
| Income from— | | | |
| Dues | \$ 13,733.80 | \$ 13,535.60 | \$ 198.20 |
| Interest on investments and bank balances.... | 2,095.76 | 2,211.49 | 115.73 |
| Profit and loss on securities redeemed or sold | 57.50 | 321.85 | 379.35 |
| <i>Economic Essays</i> | 20.33 | 12.56 | 7.77 |
| Other sources | 3.92 | 2.38 | 1.54 |
| Total income | \$ 15,911.31 | \$ 15,440.18 | \$ 471.13 |
| Expenses and costs— | | | |
| Administrative and other operating expenses.. | \$ 5,651.09 | \$ 5,587.67 | \$ 63.42 |
| Publication costs..... | 13,254.00 | 14,852.97 | 1,598.97 |
| Publication income..... | 5,882.84 | 6,615.08 | 732.24 |
| Total expenses and costs..... | \$ 13,022.25 | \$ 13,825.56 | \$ 803.31 |
| Net income..... | \$ 2,889.06 | \$ 1,614.62 | \$ 1,274.44 |

The membership roll was decreased by 72 members during the year.

A loss of \$321.85 on securities resulted from the following sales:

| <i>Security</i> | Cost | Selling price | Profit or loss |
|---|-------------|------------------|----------------------|
| Armour and Company first and refunding 5½% bonds of 1943..... | \$ 1,870.00 | \$ 1,389.50 | \$ 480.50 |
| Commonwealth Edison Co. first mortgage 5% bonds of 1943 | 2,050.00 | 2,208.65 | 158.65 |
| Totals | \$ 3,920.00 | \$ 3,598.15 | \$ 321.85 |

In the following summary the publication income and expenses for 1931 are compared with 1930 and with the budget for 1931 submitted by the managing editor:

| Particulars | Year | | Budget For 1931 |
|--|--------------|--------------|--------------------|
| | 1930 | 1931 | |
| Income— | | | |
| Subscriptions other than from members..... | \$ 4,917.42 | \$ 5,132.45 | |
| Sales of copies..... | 588.10 | 749.06 | |
| Advertising | 377.32 | 733.57 | |
| Total income..... | \$ 5,882.84 | \$ 6,615.08 | |
| Expenses— | | | |
| Printing | \$ 5,312.09 | \$ 5,648.20 | \$ 5,300.00 |
| Editor's honorarium..... | 2,500.00 | 2,500.00 | 2,500.00 |
| Contributions | 1,447.75 | 1,453.25 | 1,500.00 |
| Proceedings | 1,353.91 | 1,919.18 | — |
| Handbook | — | 589.54 | — |
| Other costs..... | 2,640.25 | 2,742.80 | 2,700.00 |
| Total expenses..... | \$ 13,254.00 | \$ 14,852.97 | \$ 12,000.00 |
| Net expenses..... | \$ 7,371.16 | \$ 8,237.89 | |

The budget of the managing editor was based on a printing of 4,300 copies; 4,400 copies of each issue were printed, the total pages being 836.

The *Proceedings* and *Handbook*, issued by the Secretary, cost \$2,508.72.

| Particulars | Pages | Copies | Cost |
|--------------------------|-------|--------|------------|
| <i>Proceedings</i> | 308 | 4,300 | \$1,919.18 |
| <i>Handbook</i> | 88 | 4,200 | 589.54 |
| Total | | | \$2,508.72 |

Forty-two hundred copies were issued of the 1930 *Proceedings* which contained 218 pages.

Balance Sheet—December 12, 1931

Cash in checking and saving accounts was reconciled to a certificate received from the State Bank and Trust Company, Evanston, Illinois.

The securities are in the custody of the State Bank and Trust Company, who furnished us with a certified list of the securities held. The finance committee is preparing a report on the securities owned.

During the year, \$212.41 was spent from the membership extension fund for printing, postage, and salaries.

Life memberships were reduced by \$675.00 for the following reasons:

| Particulars | Amount |
|--|-----------|
| Deaths (3)..... | \$ 225.00 |
| Lack of address (6)..... | 200.00 |
| Removals authorized by Mr. F. S. Deibler as result of registered mailing of December, 1930, <i>Review</i> (4) | 250.00 |
| Total | \$ 675.00 |

Changes in Financial Condition

The changes in the financial condition of the Association during the year are reflected in the following comparison of the balance sheets at December 15, 1930, and December 12, 1931:

| <i>Assets</i> | December 15, 1930 | December 12, 1931 | Increase or decrease |
|---|----------------------|----------------------|----------------------------|
| Cash and cash funds..... | \$ 9,008.48 | \$ 3,863.61 | \$ 5,144.87 |
| Investments, at cost..... | 32,439.48 | 39,134.48 | 6,695.00 |
| Receivables (net)..... | 756.60 | 1,013.25 | 256.65 |
| Inventories, at cost..... | 1,577.13 | 1,611.72 | 34.59 |
| Furniture, fixtures, etc., at cost..... | 1,127.91 | 1,139.99 | 12.08 |
| Reserve for depreciation | 546.61 | 636.84 | 90.23 |
| Total assets..... | <u>\$ 44,362.99</u> | <u>\$ 46,126.21</u> | <u>\$ 1,763.22</u> |
| <i>Liabilities and net worth</i> | | | |
| Accounts payable..... | \$ 10.00 | \$ 138.95 | \$ 128.95 |
| Unearned income..... | 2,240.43 | 2,272.49 | 32.06 |
| Membership extension fund..... | 4,880.14 | 4,667.73 | 212.41 |
| Life memberships..... | 6,025.00 | 5,550.00 | 475.00 |
| Surplus— | | | |
| Balance—December 15, 1930..... | 31,207.42 | 31,207.42 | — |
| Net income for the year ending December 12, 1931 | — | 1,614.62 | 1,614.62 |
| Transfer from life memberships to surplus— 1931 | — | 675.00 | 675.00 |
| Total liabilities and net worth..... | <u>\$ 44,362.99</u> | <u>\$ 46,126.21</u> | <u>\$ 1,763.22</u> |

On July 15, 1931, the balance in the savings account in the Central Trust Company, Cambridge, Massachusetts, was withdrawn. The decrease in cash and the net income for the year were invested in bonds.

We appreciate the courtesies extended to us during the course of the audit.

Very truly yours,

E. L. KOHLER AND COMPANY
Certified Public Accountants

EXHIBIT I

AMERICAN ECONOMIC ASSOCIATION, INCORPORATED

BALANCE SHEET, DECEMBER 12, 1931

Assets

CURRENT ASSETS AND INVESTMENTS:

| | | | |
|--|-------------|----------|--------------|
| Cash in State Bank and Trust Company, Evanston, Illinois..... | \$ 3,863.61 | | |
| Investments, at cost..... | 39,134.48 | | |
| Receivables— | | | |
| Review advertising..... | \$ 230.25 | | |
| Interest accrued on investments..... | 557.30 | | |
| Membership dues..... | 332.50 | | |
| Publication sales..... | 128.20 | | |
| Total receivables..... | \$ 1,248.25 | | |
| Less—Reserve for doubtful accounts..... | 235.00 | 1,013.25 | |
| Inventories, at cost— | | | |
| Economic Essays..... | \$ 1,236.00 | | |
| Cover stock..... | 264.28 | | |
| Stamped envelopes..... | 111.44 | 1,611.72 | \$ 45,623.06 |

FURNITURE, FIXTURES AND BOUND

| | | | |
|------------------------------------|-------------|--------|--------------|
| PERIODICALS, at cost..... | \$ 1,139.99 | | |
| Less—Reserve for depreciation..... | 636.84 | 503.15 | |
| Total assets..... | | | \$ 46,126.21 |

Liabilities and Net Worth

CURRENT LIABILITIES:

| | | | |
|--------------------------------|-----------|----------|-------------|
| Accounts payable..... | \$ 138.95 | | |
| Unearned income— | | | |
| Membership dues..... | \$ 411.08 | | |
| Subscriptions | 1,816.41 | | |
| Advertising | 45.00 | 2,272.49 | \$ 2,411.44 |
| MEMBERSHIP EXTENSION FUND..... | | | 4,667.73 |

NET WORTH:

| | | | |
|---|--------------|-----------|--------------|
| Life memberships..... | \$ 5,550.00 | | |
| Surplus unappropriated— | | | |
| Balance—December 15, 1930..... | \$ 31,207.42 | | |
| Net income—Year ending December 12, 1931 (Exhibit II)..... | 1,614.62 | | |
| Transfer from life memberships..... | 675.00 | 33,497.04 | 39,047.04 |
| Total liabilities and net worth..... | | | \$ 46,126.21 |

EXHIBIT II

| Particulars | Amount | |
|--|-------------|-------------|
| INCOME FROM DUES: | | |
| Regular members (less \$250.00 defaulted dues unpaid at December 12, 1931) | \$13,040.60 | |
| Subscribing and contributing members | 495.00 | \$13,535.60 |
| OTHER INCOME: | | |
| Income from investments— | | |
| Interest earned on— | | |
| Bonds | \$ 1,886.81 | |
| Certificates of deposit | 85.85 | |
| | \$ 1,972.66 | |
| Less— | | |
| Custodian's fee | \$ 35.85 | |
| Loss (net) on sales of bonds | 321.85 | 357.70 |
| | | \$ 1,614.96 |
| Interest earned on savings and checking accounts | 274.68 | |
| Royalties on <i>Economic Essays</i> | 12.56 | |
| Miscellaneous income | 2.38 | 1,904.58 |
| Total income | | \$15,440.18 |
| ADMINISTRATIVE AND OTHER OPERATING EXPENSES: | | |
| Secretary's salary | \$ 1,000.00 | |
| Office salaries | 2,951.67 | |
| Postage | 395.70 | |
| Stationery and printing | 119.23 | |
| Office supplies | 30.68 | |
| Telephone and telegrams | 63.98 | |
| Insurance | 79.10 | |
| Depreciation | 90.23 | |
| Annual meeting | 283.71 | |
| Executive Committee expense | 356.36 | |
| American Council of Learned Societies | 65.00 | |
| Auditing | 50.00 | |
| Other expenses | 102.01 | \$ 5,587.67 |
| PUBLICATION EXPENSES: | | |
| Printing | \$ 5,648.20 | |
| Editor's honorarium | 2,500.00 | |
| Editor's traveling expenses | 60.35 | |
| Editorial expenses and supplies | 2,632.60 | |
| Contributions | 1,453.25 | |
| <i>Proceedings</i> | 1,919.18 | |
| <i>Handbook</i> | 589.54 | |
| Sundry publication expense | 49.85 | |
| Total publication expenses | \$14,852.97 | |
| Publication income— | | |
| Subscriptions other than from members | \$5,132.45 | |
| Sales of copies | 749.06 | |
| Advertising | 733.57 | 6,615.08 |
| | | 8,237.89 |
| Total expenses | | \$13,825.56 |
| Net income for year (Exhibit I) | | \$ 1,614.62 |

REPORT OF THE MANAGING EDITOR OF THE AMERICAN ECONOMIC REVIEW FOR THE YEAR ENDING DECEMBER, 1931

The cost of the *Review* during 1931 was \$11,982.29 as compared with \$11,935.22 for 1930. There will be a small additional amount for postage, excerpts and reprints for the December number, the charge for which had not come from the printer when the books of the treasurer had to be closed. It is to be noted that the total expenditure was very close to the budget estimate made last year, \$12,000.

There was a slight increase in the number of copies printed—4,400 per issue in 1931 as compared with 4,300 in 1930. The number of pages was 814 as compared with 811 in 1930.

By principal items the cost of the *Review* during 1931 was as follows:¹

| | |
|---|-------------|
| Printing (paper, reprints, postage, etc.) | \$5,399.94 |
| Editorial | 2,500.00 |
| Clerical | 2,300.00 |
| Supplies | 327.60 |
| Contributors | 1,454.75 |
| | <hr/> |
| | \$11,982.29 |

On the basis of printing 4,400 copies the following budget for 1932 is submitted:

| | |
|---|-------------|
| Printing (paper, reprints, postage, etc.) | \$ 5,400.00 |
| Editorial | 2,500.00 |
| Clerical | 2,300.00 |
| Supplies | 300.00 |
| Contributors | 1,500.00 |
| | <hr/> |
| | \$12,000.00 |

The following persons have served as editors during the past year: Professor I. L. Sharfman and Professor Sumner H. Slichter, whose terms expire this year; Professor F. B. Garver and Professor N. S. B. Gras, whose terms expire in 1932; and Dr. L. C. Gray and Professor Myron W. Watkins, whose terms expire in 1933.

During the past year nearly 200 persons have co-operated in writing leading articles, communications, reviews, and notes.

Appended are the comparative tables showing the distribution of contents and cost by principal items, in continuation of tables previously given.

Respectfully submitted,

DAVIS R. DEWEY, *Managing Editor*

¹ The Editor's report is based on the calendar year. The Treasurer's and the Auditor's reports are on the fiscal year December 15, 1930, to December 12, 1931.

TABLE I—PAGES GIVEN TO EACH SECTION*

| Year | Leading articles | Re-views | New books listed | Docu-ments, re-ports, etc. | Periodical abstracts | Notes | Theses | Totals |
|------|------------------|----------|------------------|----------------------------|----------------------|-------|--------|--------|
| 1920 | 395 | 109 | 155 | 98 | 122 | 42 | 15 | 936 |
| 1921 | 331 | 103 | 133 | 39 | 117 | 38 | 11 | 772 |
| 1922 | 293 | 91 | 158 | 55 | 124 | 37 | 13 | 752 |
| 1923 | 298 | 122 | 184 | 26 | 113 | 43 | 14 | 800 |
| 1924 | 339 | 110 | 191 | 23 | 113 | 42 | 18 | 836 |
| 1925 | 325 | 131 | 178 | 27 | 110 | 38 | 23 | 832 |
| 1926 | 270 | 137 | 184 | 15 | 108 | 43 | 27 | 784 |
| 1927 | 262 | 120 | 195 | 32 | 114 | 42 | 27 | 792 |
| 1928 | 335 | 111 | 176 | 12 | 121 | 45 | 28 | 828 |
| 1929 | 315 | 181 | 173 | 18 | 1 | 52 | 28 | 768 |
| 1930 | 348 | 154 | 210 | 12 | 0 | 58 | 29 | 811 |
| 1931 | 369 | 170 | 197 | 13 | 0 | 40 | 25 | 814 |

* Figures for 1911-19 may be found in the report for 1930, published in the *Supplement*, March, 1931, p. 284.

TABLE II—EXPENDITURES

| Year | Printing | Salary of editor | Payments to contributors | Clerical | Supplies | Totals |
|------|-----------|------------------|--------------------------|-----------|----------|------------|
| 1920 | \$6656.31 | \$1500.00 | \$1122.75 | \$1595.64 | \$307.20 | \$11181.90 |
| 1921 | 5646.97 | 1500.00 | 64.50 | 1472.50 | 319.97 | 9003.94 |
| 1922 | 4795.23 | 1500.00 | — | 1370.00 | 314.77 | 7980.05 |
| 1923 | 5032.59 | 1500.00 | — | 1650.09 | 437.86 | 8620.54 |
| 1924 | 5423.23 | 1500.00 | 1110.25 | 1464.01 | 305.32 | 9802.86 |
| 1925 | 5713.01 | 1500.00 | 1133.50 | 1757.32 | 406.36 | 10510.19 |
| 1926 | 5332.24 | 1500.00 | 1123.00 | 1589.86 | 323.43 | 9873.53 |
| 1927 | 5619.20 | 1500.00 | 1013.75 | 1806.50 | 297.25 | 10236.70 |
| 1928 | 5321.95 | 1500.00 | 1190.50 | 1956.50 | 375.37 | 10344.32 |
| 1929 | 4927.62 | 1500.00 | 1328.75 | 2004.50 | 261.72 | 10022.59 |
| 1930 | 5386.67 | 2500.00 | 1447.75 | 2253.00 | 347.80 | 11935.22 |
| 1931 | 5399.94 | 2500.00 | 1454.75 | 2300.00 | 327.60 | 11982.29 |

REPORT OF THE FINANCE COMMITTEE

During the year ending December 12, 1931, the following changes in the investment list were made:

| | | |
|---------|--|------------|
| \$2,000 | Commonwealth Edison Company 1st 5's, due 1943, called | \$2,208.65 |
| 2,000 | Armour and Co. of Delaware 1st and Ref. Series "A" 5½'s, due 1943, sold | 1,389.50 |

The proceeds from these bonds, together with additional funds, were invested as follows:

| | | |
|---------|---|------------|
| \$1,000 | Alabama Power Co. 1st Mtge. Lien and Ref. 5's, due 1936 | \$1,042.50 |
| 1,000 | City of Cleveland Water Works 4½'s, due 1938 | 1,039.00 |
| 1,000 | City of New York Corp. Stock Water 4's, due 1980 | 1,007.50 |
| 2,000 | Commonwealth Edison Co. 4's, due 1981 | 1,895.00 |
| 1,000 | Detroit Edison Co. Gen. and Ref. Series "D" 4½'s, due 1961 | 1,042.50 |
| 1,000 | Great Northern Railway Co. Gen. Mtge. 7's, due 1936 | 1,105.00 |
| 1,000 | Sinclair Crude Oil Purchasing Co. 10-Yr. Series "A" 5½'s, due 1938 .. | 1,032.50 |
| 1,000 | Southern Pacific Railway 50-Yr. 4½'s, due 1981 | 927.50 |
| 1,500 | United States of America Treasury 3½'s, due 1949 | 1,523.50 |

For many years the Association has maintained a savings account with the Central Trust Company of Cambridge, Massachusetts. While no question arose as to the safety of this account, it was the sense of your Committee that funds, segregated for purpose of investment, should be invested in readily marketable securities that would lend themselves to frequent scrutiny and publication. The account, therefore, was closed, and the funds, together with the proceeds of the bonds sold, were invested in the list of securities described above.

The total investments of the Association, carried at cost or market, whichever is lower, now amount to \$32,205.19. The market value of the list on December 22 was \$6,827.04 below cost. The investments of the Association have been formally reviewed quarterly by your Committee, and have in fact been investigated more frequently than this. The annual interest return from this list now amounts to \$1,964.35.

The year 1931 has been notorious for declines in all types of security prices. Your Committee has not regarded the portfolio of the Association as an account in which the securities were to be traded for profit. It has followed the policy of watching for stability of earnings of the issuing companies, and their ability to meet the principal account at its maturity. Whenever any security has been unable to meet these two tests, it has been promptly sold and the funds reinvested in accordance with the principles here stated.

At the end of last year, Mr. Waddill Catchings, who had served on the Finance Committee since 1925, tendered his resignation. The Executive Committee appointed Mr. George B. Roberts, Jr., of the National City Bank of New York to fill the vacancy.

The list, at market or cost, whichever is lower, stands as follows:

| | | |
|---------|--|-----------|
| \$1,000 | Alabama Power Co. 1st Mtge. Lien and Ref. 5's, due 1936 | \$ 965.00 |
| 2,000 | Bell Telephone Company of Pa. 1st and Ref. 5's, due 1948 | 1,973.00 |
| 1,000 | By-Products Coke Corp. 1st Mtge. 5½'s, due 1945 | 598.75 |
| 1,000 | Chicago, Rock Island and Pacific Equip. Tr. Series "P" 4½'s, due 1936 .. | 900.00 |
| 1,000 | City of Cleveland Water Works 4½'s, due 1938 | 950.00 |
| 1,000 | City of New York Corp. Stock Water 4's, due 1980 | 780.00 |

| | | |
|-------|--|----------|
| 2,000 | Commonwealth Edison Co. 4's, due 1981 | 1,625.00 |
| 1,000 | Crown Willamette Paper Co. 1st S.F. 6's, due 1951 | 705.00 |
| 1,000 | Detroit Edison Co. Gen. and Ref. Series "D" 4½'s, due 1961 | 925.00 |
| 1,000 | Erie Railroad Co. Ref. and Imp. 5's, due 1975 | 875.00 |
| 2,000 | Great Northern Railway Co. Gen. Mtge. 7's, due 1936 | 1,880.00 |
| 2,000 | Illinois Bell Telephone Co. 1st and Ref. "A" 5's, due 1956 | 2,000.00 |
| 2,000 | Illinois Central Railroad Co. 1st and Ref. "A" 5's, due 1963 | 900.00 |
| 1,000 | Louisville Gas and Elec. Co. 1st and Ref. 5's, due 1952 | 915.00 |
| 1,000 | National Dairy Products Corp. 5¼% Debentures, due 1948 | 860.00 |
| 1,000 | North American Edison Co. Deb. Series "C" 5's, due 1969 | 781.25 |
| 5,000 | Northern Pacific Railway Co. Ref. and Imp. 6's, due 2047 | 3,950.00 |
| 1,000 | Ohio Power Co. 1st and Ref. "D" 4½'s, due 1956 | 850.00 |
| 2,000 | Pacific Gas and Electric Co. 1st and Ref. 5½'s, due 1952 | 1,970.00 |
| 2,000 | Pacific Mills, Ltd. 1st Serial 6's, due 1935 | 1,400.00 |
| 1,000 | Pennsylvania Railroad Co. Deb. 4½'s, due 1970 | 640.00 |
| 1,000 | Sinclair Crude Oil Purchasing Co. 10-Yr Series "A" 5½'s, due 1938 .. | 940.00 |
| 1,000 | Southern Ill. and Mo. Bridge Co. 4's, due 1951 | 450.00 |
| 1,000 | Southern Pacific Railway 50-Yr 4½'s, due 1981 | 642.50 |
| 1,000 | United Biscuit Co. 6's, due 1942 | 947.50 |
| 2,000 | United States of America 4th Liberty Loan 4¼'s, due 1933 | 2,000.00 |
| 1,500 | United States of America Treasury 3½'s, due 1949 | 1,332.19 |

Respectfully submitted,

C. H. Crennan, *Chairman*

F. S. DEIBLER

GEORGE B. ROBERTS, JR.

REPORT OF THE REPRESENTATIVES OF THE AMERICAN ECONOMIC ASSOCIATION TO THE AMERICAN COUNCIL OF LEARNED SOCIETIES

The following is a cutting from the annual report of the American Council of Learned Societies that is thought to be of special interest to members of the American Economic Association:

Members of the staff have carried on certain specific projects or studies, such as the *Catalogue of Current Bibliographies*, a planographed trial edition of which was prepared for the meeting of the UAL, the study of American philological journals, on which a preliminary report will be presented to the Council at the next annual meeting, the final editing and preparation for publication of the report on *Linguistic and National Stocks in the Population of the United States in 1790*, which is to be published by the American Historical Association, and the revision of a *List of American Serial Publications in the Humanities*, which will be printed in an early number of the *Bulletin*.

Glossary of Medieval Italian Terms of Business. (A project of the Mediaeval Academy of America.) Dr. Florence Edler, working under the direction of Professor N. S. B. Gras, has completed a first part of the *Glossary*. Three hundred entries from this part are being planographed for preliminary distribution during December. These entries deal with accounting, banking and exchange, insurance and surety, forms of business association and of sales, business men, employees and business auxiliaries, transportation and warehousing, and customs dues and tolls. During 1931 plans have been approved by the Academy for the continuance of Dr. Edler's work and for enlisting the aid and co-operation of other scholars, including an Italian, to continue the study of Italian terms. Plans have also been approved for initiating a study of medieval Latin terms, particularly as found in Genoese documents.

Respectfully submitted,

WALTER F. WILLCOX

EDWIN F. GAY

REPORT OF THE JOINT CENSUS ADVISORY COMMITTEE

A meeting of the Joint Advisory Committee of the American Statistical and American Economic Associations with the Director of the Census was held at the Bureau of the Census, March 13 and 14, 1931. The main subject of discussion was the wisdom of planning a new series of monographs, and at the end the Committee recommended a provisional list of five, two of which it is understood are now in course of preparation each by a member of the Committee.

During the period after the problems growing out of the census have for the most part been settled and before questions arising in connection with the intercensal work on other subjects come to the front, the Director of the Census has had little occasion to consult with the Advisory Committee.

The following resolutions were adopted:

199. Resolved that in addition to continuing the series of monographs started after the census of 1920 the Committee recommends that a series of briefs and more popular studies be prepared within the census period to take the place of the text of earlier reports.

200. Resolved that the Committee recommends that the Census Bureau aim at the preparation of brief studies on each group of tables in each of the four main reports into which the Census of 1930 will be divided.

201. In view of the extensive experience of the Department of Agriculture in research in its field, the Advisory Committee recommends that the preparation of studies and monographs in the field of census statistics of agriculture be limited to a few monographs based upon census material.

202. Resolved that the Advisory Committee recommends that a series of chapters on the statistics of distribution, wholesale and retail, in its various phases based on the results of the census of distribution be prepared for publication within the census period.

203. The Advisory Committee recommends that every effort be made to finish the publication of the census of 1930 at the earliest possible date and in any case within the three year census period ending December 31, 1932.

204. The Advisory Committee believes that the series of monographs started after the census of 1920 should be continued but that the number to be published within the present census period should not exceed six.

205. Resolved that the Advisory Committee suggests the following as a provisional list of subjects for monographs:

- (1) Occupational Changes in the United States
(Author—Professor King)
- (2) Vital Statistics in the United States, 1900 to 1930
(Author—Professor Willcox)
- (3) Differential Fecundity
(Author—Dr. Notestein)
- (4) Location of Manufactures
(Author—Professor Thompson)
- (5) Age Composition of the Population of the United States
(Author—Professor Chaddock)

206. Resolved that the Advisory Committee recommends that the office be requested to prepare as early as possible a typical study and submit it to the members of the Advisory Committee for their comments.

207. Resolved that the Advisory Committee recommends that the Bureau of the Census prepare a topical index to all the volumes of the Fifteenth Census.

Respectfully submitted,

W. F. WILLCOX

REPORT ON THE ENCYCLOPAEDIA OF THE SOCIAL SCIENCES

Since the last annual report which was made in December, 1930, the work has progressed satisfactorily. Volumes 4, 5, and 6 appeared in 1931, and Volumes 7, 8, and 9 are either in the printer's hands or in a forward state of preparation, and will appear in 1932. There is no reason why we may not look forward to a completion of the entire fifteen volumes before the end of 1934.

The efforts that have been necessary in order to maintain our standards and to keep to our program of three volumes a year have been very great. For some time we have had a force of fifty-six helpers of whom some twenty odd have been assistant editors, each of them an expert in his own field, and the consequence has been that our expenses have been far more than was originally anticipated. We have for some time been spending for editorial purposes, including payment for contributions, \$215,000 a year. As a consequence the entire enterprise will give an outlay for editorial expenses of about \$1,250,000 instead of the \$600,000 originally estimated.

The carrying out of this great enterprise has been rendered possible by the help of the Rockefeller Foundation, the Carnegie Corporation, and the Russell Sage Foundation, together with contributions from individuals. Our budget for the coming year has been completely covered. We entertain a lively hope that we shall be able to push the project through to completion.

Although no effort has, for obvious reasons, been made to institute a drive or selling campaign during the present depression, it may be of interest to note that we have already sold about five thousand sets of the work in the ordinary channels. As soon as conditions permit, the publishers intend to institute a vigorous selling campaign.

The reviews which are now becoming abundant in the scientific journals of the entire world have been without exception uniformly favorable and many of them in fact embarrassingly laudatory. We hope to be able to maintain the same high standard for the rest of the work.

Respectfully submitted,

EDWIN R. A. SELIGMAN

REPORT OF AN INTERIM COMMITTEE ON RESEARCH

As the result of correspondence with Dr. Meredith B. Givens, Secretary of the Committee on Industry and Trade, of the Social Science Research Council, a meeting was held in Chicago, Illinois, on October 24, 1931.

The matter under consideration was how the Social Science Research Council and the American Economic Association might co-operate in the most effective manner to foster research.

The following report and resolutions were drafted to be presented for approval to the Executive Committee:

An informal meeting was held in Chicago on October 24, 1931, at the request of the Social Science Research Council in which the following persons participated: President E. L. Bogart of the American Economic Association, Professor F. S. Deibler, Secretary of the Association, Professor H. A. Millis, and Professor Max S. Handman, the representatives of the Association to the Social Science Research Council and Dr. Meredith B. Givens, the Research Secretary of the Council's Committee on Industry and Trade. Professor A. B. Wolfe, the third representative of the Association to the Council, was absent, but the present report was submitted to him for his approval.

The meeting grew out of a request from the President of the Social Science Research Council to the American Economic Association to consider ways and means in which the Council could co-operate with the American Economic Association in order to promote research in the field of economics. After canvassing the situation, the persons present at the meeting came to the following conclusions:

That they recommend to the Executive Committee of the American Economic Association that a standing committee be set up to be known as the Committee on Research, to be made up of three members, and to function for a period of three years. If possible, one of the members of this committee shall be one of the Association's representatives to the Social Science Research Council. The functions of this committee shall be as follows:

1. To sit with the Social Science Research Council during such times as the Council shall see fit in order to communicate to it those problems on which the Council's help and advice might be needed.
2. To receive from the Council information and suggestions concerning research in economics, and to submit to the Council similar suggestions.
3. To be the repository of such funds as the Association might receive from any source for the encouragement of research and to function as a clearing house to which requests might be directed for funds and information in support of research by the members of the Association.
4. To canvass the possibilities of setting up regional or local committees for the purpose of fostering economic research in those regions where at present, owing to financial and educational disadvantages, it is difficult, if not impossible, for the economists living in those regions to find the necessary time and support for such problems as they may feel impelled to investigate.

5. To co-operate with local and regional persons and groups in an effort to ascertain to what extent there exists research material which is in danger of being lost or scattered, and to take steps to safeguard and preserve such material.
6. To negotiate with the American Library Association in order to establish some arrangement by which significant foreign and domestic materials, such as statistical publications of governments and municipalities and fugitive material of interest to members of the Association, might be collected and stored in a few strategic centers, due attention being paid to already existing collections and the possibility of making these collections more effective and complete.
7. To encourage local and regional meetings of economists similar to those now carried on by the local branches of the American Statistical Association and, if possible, to see to it that these local and regional groups are visited occasionally by a member of this committee, by a representative of the Social Science Research Council, or by any other representative of the American Economic Association.

It is of course realized that a committee charged with such a program cannot carry on without adequate secretarial help and without sufficient funds to meet the expenses incident to its activity. It is hoped, and there seems sufficient reason for such hope, that funds can be obtained either through or from the Social Science Research Council or other agencies in addition to those collected from dues paid by the members of the Association. The setting up of such a committee and the range of its activities brings the American Economic Association in line with the activities of other scientific societies who are realizing that they have a responsibility towards those areas and towards those members who are barred from making their contribution to science because of the difficulties of time and resources under which they are laboring.

It is further recommended that the *American Economic Review* carry in its columns notices of meetings of these local groups and that a place be kept on the program of the annual meetings for the discussion of problems of research and its stimulation.

Respectfully submitted,

E. L. BOGART
F. S. DEIBLER
MEREDITH B. GIVENS
H. A. MILLIS
A. B. WOLFE
MAX S. HANDMAN

PUBLICATIONS

OF THE

AMERICAN ECONOMIC ASSOCIATION

1932

FIRST SERIES

Numbers starred are sold only with the sets; the supply of those double starred is exhausted. For information apply to the Secretary.

Volume I, 1886

| | Price in paper |
|---|----------------|
| 1. Report of Organization of the American Economic Association. Pp. 46. | \$.50 |
| 2-3. ** Relation of the Modern Municipality to the Gas Supply. By E. J. James. Pp. 66. | .75 |
| 4. Co-operation in a Western City. By Albert Shaw. Pp. 106. | .75 |
| 5. ** Co-operation in New England. By E. W. Bemis. Pp. 136. | .75 |
| 6. ** Relation of the State to Industrial Action. By H. C. Adams. Pp. 85. | .75 |

Volume II, 1887

| | |
|--|-----|
| 1. Three Phases of Co-operation in the West. By Amos G. Warner. Pp. 119. | .75 |
| 2. Historical Sketch of the Finances of Pennsylvania. By T. K. Worthington. Pp. 106. | .75 |
| 3. The Railway Question. By Edmund J. James. Pp. 68. | .75 |
| 4. Early History of the English Woolen Industry. By W. J. Ashley. Pp. 85. | .75 |
| 5. ** Mediæval Guilds of England. By E. R. A. Seligman. Pp. 113. | .75 |
| 6. Relation of Modern Municipalities to Quasi-Public Works. By H. C. Adams and others. Pp. 87. | .75 |

Volume III, 1888

| | |
|---|------|
| 1. Statistics in College, by C. D. Wright; Sociology and Political Economy, F. H. Giddings; The Legal-Tender Decisions, by E. J. James. Pp. 80. | .75 |
| 2. Capital and Its Earnings. By John B. Clark. Pp. 69. | .75 |
| 3. The Manual Laboring Class, by F. A. Walker; Mine Labor in the Hocking Valley, by E. W. Bemis; Report of the Second Annual Meeting. Pp. 86. | .75 |
| 4-5. ** Statistics and Economics. By Richmond Mayo-Smith. Pp. 127. | 1.00 |
| 6. The Stability of Prices. By Simon N. Patten. Pp. 64. | .75 |

Volume IV, 1889

1. Contributions to the Wages Question: The Theory of Wages, by Stuart Wood; Possibility of a Scientific Law of Wages, by J. B. Clark. Pp. 69. \$.75
2. Socialism in England. By Sidney Webb. Pp. 73. .75
3. Road Legislation for the American State. By J. W. Jenks. Pp. 83. .75
4. Third Annual Meeting: Report of the Proceedings. Pp. 123. .75
5. ** Malthus and Ricardo, by S. N. Patten; The Study of Statistics, by D. R. Dewey; Analysis in Political Economy, by W. W. Folwell. Pp. 69. .75
6. An Honest Dollar. By E. Benjamin Andrews. Pp. 50. .50

Volume V, 1890

1. The Industrial Transition in Japan. By Yeiji-ro Ono. Pp. 122. 1.00
2. Two Essays on Child-Labor. By W. F. Willoughby and Clare de Graffenried. Pp. 150. .75
- 3-4. Papers on the Canal Question. By E. J. James and L. M. Haupt. Pp. 85. 1.00
5. History of the New York Property Tax. By J. C. Schwab. Pp. 108. 1.00
6. Educational Value of Political Economy. By S. N. Patten. Pp. 36. .75

Volume VI, 1891

- 1-2. Fourth Annual Meeting: Reports, Papers, Discussions. 1.00
3. Government Forestry. Papers by Pinchot, Bowers, and Fernow. Pp. 102. .75
- 4-5. Municipal Ownership of Gas in the U.S. By E. W. Bemis. Pp. 185. 1.00
6. State Railroad Commissions. By F. C. Clark. Pp. 110. .75

Volume VII, 1892

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